Vol 8 The War Illustrated N° 186

Edited by Sir John Hammerton

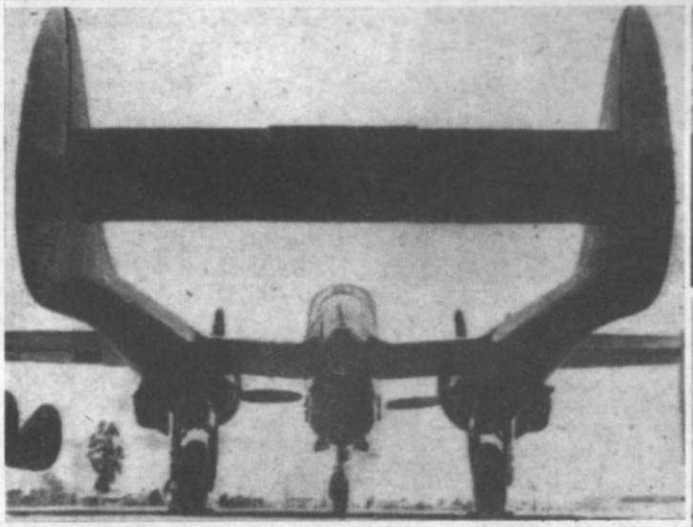
SIXPENCE AUGUST 4, 1944

HOW ARE THE MIGHTY FALLEN! This German 60-ton Tiger tank, shorn for ever of its deadly power and now hurled on its side and with one track missing, yet retains one degree of usefulness—it provides shelter from the rain for a resting British soldier on the Italian front. Enormous losses of armour and equipment have been suffered by the enemy in our latest offensives; as much as possible is salvaged for prompt repair and re-use by the Allies, or for shipment as scrap for conversion into new weapons. *Photo, Keystone*

Our Roving Camera Visits Allied Air Forces

INDIAN AIRFIELDS find elephants useful for hauling grounded aircraft, which they do with the same unconcern as they handle timber. At a Fleet Air Arm station in the Indian Ocean area one pulls its weight at the end of ropes in order to get a plane into position (left).

RUSSIAN MECHANIC gets to know something about a Fortress engine from a U.S. aircraftman at a field somewhere in the Soviet Union (below). Occasion was on June 2, 1944 after the first "shuttle" raid carried out by bombers of U.S. Strategic Air Forces in Europe, which attacked targets in Rumania before proceeding to bases prepared for them in Russia; on June 6 they bombed oilfields at Galatz from these bases.



U.S. 'BLACK WIDOW' NIGHT-FIGHTER is named after a deadly spider found in America. It is reputed to be one of the largest and most powerful pursuit aircraft yet built. Otherwise known as the Northrop P-61, the Black Widow has two Pratt and Whitney engines, a tricycle undercarriage and, as this rear view shows, unusual twin fuselages.

IN NORMANDY the famous Spitfire was known only by repute until the Allies landed in France. These French children (above) crowd round ground staff men of an R.A.A.F. squadron operating in the bridge-head to admire one of their planes, and even have the thrill of standing on its wings. The R.A.A.F. is playing a big part in covering operations with our ground forces on the Western Front.

CAEN CATTLE could not resist approaching to investigate this strange object which suddenly fell from the skies into their field (left). The wings and engine were all that remained of a German fighter, which a few minutes before had been circling and twisting overhead in vain endeavour to escape the bullets of the R.A.F. plane that eventually brought it down.

Photos, British and Australian Official, Planet News, Keystone

THE BATTLE FRONTS

by Maj.-Gen. Sir Charles Gwynn, K.C.B., D.S.O.

SINCE I last wrote, Germany's situation has continued to deteriorate rapidly. For many months the threat of the opening of a western front and the air offensive based on Britain had exercised a very great influence on the eastern front, immobilizing Germany's reserves and steadily undermining her war industries. But the German General Staff and people were confident that their western wall had been made practically impregnable by the precautions taken; and if, contrary to all expectations, the Allies did succeed in effecting a landing it was believed that they could be crushed decisively before they could become really dangerous, without diverting troops from the east to an extent which would endanger the situation there. Since it was held that a successful counter-stroke or failure to effect a landing would convince the Allies that a negotiated peace was all they could hope for, the western was looked on as the front where the decisive battle would be fought. Now that the Germans have seen a great army successfully landed and so firmly established that hopes of crushing it by a counter-offensive have practically disappeared, the shock to their morale can be well understood.

BUT what may have an even greater effect on their morale is the concrete proof that the opening of the western front has already had disastrous effects on the eastern front. Their own military authorities have been forced to excuse the catastrophe which has overwhelmed Von Busch's Army and opened the gateway to East Prussia, by claiming that it had been necessary to withdraw reserves from the east in order to reinforce Rommel. The two Panzer Corps that were withdrawn might well have averted the most disastrous consequences of the Russian break-through, and it is evident that they arrived too late in the west to enable Rommel to crush Montgomery's armies before they were firmly established, or materially to improve his situation. It would seem that the German High Command have repeated the blunder which in 1914 sent two army corps racing across Europe to repel the Russian invasion of East Prussia only to arrive too late to affect the situation there; while their presence in France might well have tipped the scales on the Marne.

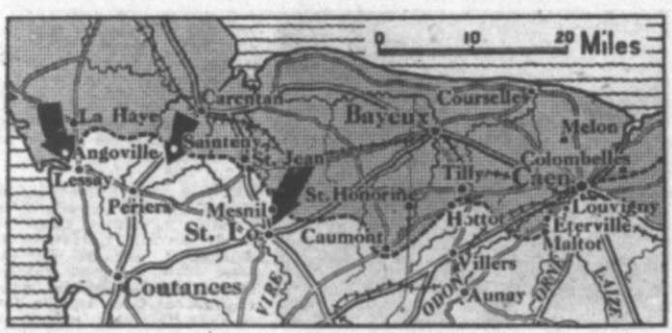
FRANCE In Normandy there has been much heavy fighting, but it is clear that up to the time of writing Montgomery has made no attempt to launch a far-reaching general offensive, and he may not be ready to do so for some time yet. His objects so far have evidently been, while building up his resources, to gain room for the effective deployment of his armies in depth and thus avoid the danger of congestion at his base of operations when his whole force is set in motion. By strong local attacks to gain ground at a number of points he also maintained heavy pressure on Rommel, compelling him to dissipate his reserves and subjecting him to processes of attrition which must always be more severely felt by the numerically weaker army. Under this pressure Rommel, in attempts to recover lost ground, was induced to deliver a series of costly counter-attacks in which his strong panzer force, with which he hoped to regain the initiative and possibly deliver a decisive counter-blow, has suffered heavily. Montgomery, on the other hand, has retained the initiative continuously in spite of the handicap of weather, which on occasions greatly restricted air co-operation to which he attaches so great importance.

THE Germans now admit that their hopes of staging a counter-offensive before Montgomery was firmly established were shattered by the air offensive against the road and railway communications by which they had confidently relied on being able to bring up rapidly their strategic reserves. Once again German High Commanders failed to appreciate the offensive potentialities of their opponents, and it is somewhat surprising that their reserves were held so far back, considering how thoroughly our air supremacy had been established and how clearly the Cherbourg peninsula was indicated as the most probable scene of an initial landing attempt.

The interruption by bad weather on several days of our air offensive enabled the movements of German reserves to be accelerated, but Montgomery's persistent attacks drew them into battle as they arrived. Rommel is now very definitely on the defensive and his object must be to keep Montgomery's armies within a restricted area. He cannot afford to carry out an elastic defence, for it would entail a constant increase in the length of his front, already overlong for the troops he has available. The loss of Caen and La Haye du Puits, the bastion positions covering his flanks and the roads and railways which will probably dictate the direction of Montgomery's major offensive thrusts, must have been a heavy blow to him—Caen in particular, when finally cleared, will greatly facilitate further Allied operations.

Should Rommel be forced to abandon his hold on the base of the Cherbourg peninsula, operations would be bound to become much more mobile and fluid. At present it is, of course, absurd to compare the rate of progress in Normandy with that of the great Russian offensive. In Normandy no decisive break-through has yet been attempted, and in Russia, though it has now been so magnificently accomplished, it was not attempted until after many months of preparatory attacks and a building up of communications and resources very similar to that now in progress in Normandy.

Once a break-through is achieved operations take on a new tempo, especially when the enemy is deficient of reserves available to cover retreat by rearguard actions. In that case such centres of resistance as are encountered can be bypassed with impunity by advanced guards and left to be mopped up by the main body, but the rate of the advance depends mainly on the supply services of the pursuing army keeping pace, and the efficient working and organization of the base of operations.



POINTING THE WAY of the Allied drive in the Lessay-Angoville area and district of St. Lo, arrows on the map above show the position as it was on July 14, 1944. St. Lo fell on July 18, on which date, in the Caen area east of the Orne river, a new British break-through gained more ground. *By courtesy of News Chronicle*

SOVIET FORCES continued to press against the German armies on the Latvian border and in the Lithuanian regions, as here shown. On July 16, 1944, Grodno, covering the approaches to East Prussia, was taken, while by July 19 the Red Army was closing in on Brest-Litovsk. *By courtesy of News Chronicle*

RUSSIA The Russian break-through, so astonishingly complete and overwhelming, was in itself evidence of perfect preparation and planning as well as of the quality of the troops; but the maintenance of the amazing speed of the follow-through can to an even greater extent be attributed to the completeness of the preparations for the offensive. Critical as Rommel's position is in Normandy, the crisis there is far from having reached the stage it is in on the eastern front. The invasion of East Prussia may have even a greater effect on German morale than the penetration of the west wall; but it would have a less direct effect on the strictly strategical situation than if Lindemann's forty divisions in the Baltic States become isolated and incapable of taking any effective part in the defence of the homeland. It is not yet known what orders Lindemann has received, but his apparent inaction suggests that again the German High Command has hesitated to reach a decision until too late—possibly owing to Hitler's obstinacy or the divergent advice given to him. The offensive by Yeremenko's 2nd Baltic Army on the Sokolniki front should be well calculated not only to add to the difficulties of Lindemann's position but to give effective protection to the flank of Bagramyan's 1st Baltic Army against any counter-offensive Lindemann might attempt to deliver.

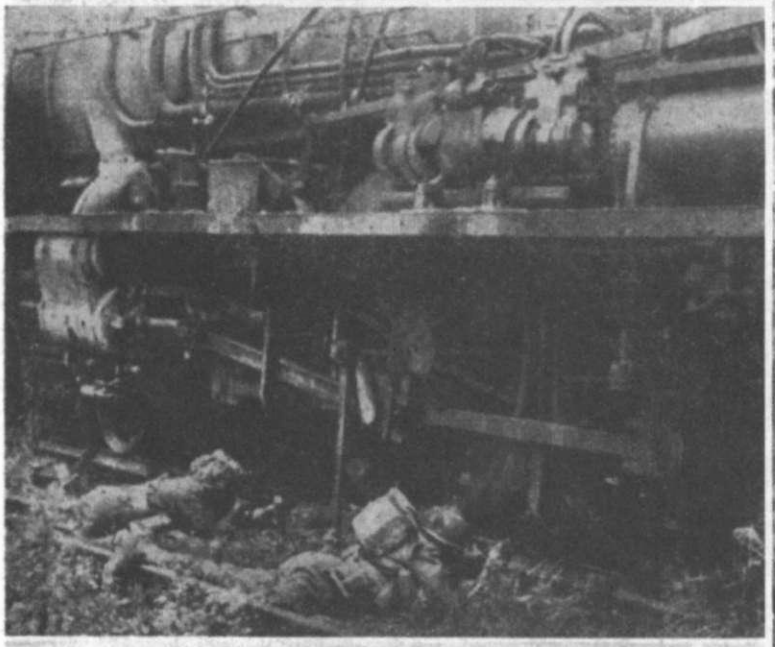
YEREMENKO's offensive, and Koniev's offensive on the Lvov front, were also evidence that the Russians have no intention of depending on one concentrated drive, but are fully prepared to open new fronts of attack when previous blows have compelled the Germans to alter the dispositions of their reserves, or when it has become difficult to maintain the impetus of the initial attacks. Such strategy is particularly well calculated to maintain relentless pressure on a weakening adversary deficient of reserve power, and was, of course, that adopted by Foch in 1918.

Koniev's offensive may prove to be the most devastating yet launched, for although the Germans expected it and had concentrated most of their armoured divisions to meet it, they may have been forced to send some of their reserves to the north. Moreover, since Koniev started 200 miles farther west than the northern offensive, the momentum of his drive to Lvov and the Carpathian passes should be further maintained.

Vital Key-city Captured on Normandy Front

MOPPING UP in the streets of Caen, British infantry turn against the enemy a Hotchkiss machine-gun which they had captured (right). Originally a German invention, an adapted type of Hotchkiss has been used by our Forces; it is a light machine-gun, firing 303 ammunition, the same calibre as our infantry rifle.

ABANDONED ENGINE in the Caen area, whose tank had been punctured by a shell, provides good cover for advancing British troops engaging German units on the other side of the railway line (below). The soldier on the left uses his rifle, while his comrade is armed with a Piat Projector, an anti-tank weapon which fires a 2½-lb. bomb and is effective against tanks and pill-boxes up to 115 yards.



ALLIED CONVOY, carrying vital supplies and more men, passes down the main street of war-battered Isigny (above), captured by our Forces on June 10, 1944, losing no time in exploiting every yard of territory we have gained on the western front.

BATTLE AFTERMATH in Caen found this key-city (left), freed by British and Canadian troops on July 9, 1944, badly damaged; but the citizens were joyful at their release from hated German rule. Capture of Caen was an important strategic step, prelude to a breakthrough into open country and use of the full weight of our armour.

Photos, British Official

Victories Garnered in Red Army's Drive West

WITH EVER-INCREASING PRESSURE, Red Army troops of the 1st Baltic Front, on July 4, 1944, took one of their major objectives since their armies emerged in the Vitebsk region last winter—the important town and railway junction of Polotsk, main gateway for the drive on Latvia and most advanced strongpoint, in the south, of the powerful German forces there. (Left) General Ivan Bagramyan, Commander of the 1st Baltic Front. (Right) Soviet infantry engaged in hard street fighting before the final capture of Polotsk.

MOGILEV, fortress in the German "Fatherland Line" defence system in eastern White Russia, was captured on June 28, 1944. Tanks of General Zakharov's 2nd White Russian Front are here seen entering the town, their crews waving encouragement to its inhabitants.

KARELIAN ISTHMUS OFFENSIVE against the Finns was launched on June 10, 1944. Eight days later the Russians had broken the Mannerheim Line (which they had smashed before, in 1940), and on June 16 they took Viipuri. Here Red Army men penetrate a captured trench system.

MINSK, CAPITAL OF WHITE RUSSIA, round which remnants of the German divisions driven back from the "Fatherland" and Beresina lines had formed along with the city's powerful garrison, fell to Soviet forces of the 3rd White Russian Front, under General Ivan Chernyakhovsky (right), in co-operation with those of the 1st White Russian Front, under Marshal Rokossovsky, on July 3, 1944. In the capital, Red Army officers talked with liberated women citizens (left).

Photos, U.S.S.R. Official, Pictorial Press, Planet News

THE WAR AT SEA

by Francis E. McMurtrie

FROM their present rate of advance it appears likely that the Soviet armies will have entered Riga by the time these lines appear. Riga is not only a valuable port, with a secure harbour at the southern end of the Gulf of Riga, but its possession should effectually cut the communications of the German armies in Estonia, unless these can be evacuated by sea. Neither side can claim control of the Baltic, but the Germans may be expected to cling as long as possible to the three large islands which partially block the mouth of the Gulf of Riga, to facilitate the safe passage of transports from Tallinn (Reval) to Danzig or ports farther west.

The three principal islands in question are Dago, Oesel and Moon, or to give them their Estonian names, Hiiumaa, Saaremaa and Muhu. All are low-lying, with considerable areas of marsh and woods. In the channels separating them from the mainland of Estonia it would be possible for motor-torpedo boats, submarines and other small craft to lie in wait for transports passing outside the islands. These islands formed an important feature of the Russian plan for resisting the German advance in 1916-17. In October of the latter year there was a naval action here, in which the Russians lost a battleship and several smaller craft, being obliged to withdraw their forces from the islands in consequence. In the German invasion of 1941 it was not possible to make so considerable a stand at this point.

According to rumour, German forces have occupied the Aaland Islands in the entrance to the Gulf of Bothnia, farther to the north-westward. Evidently the enemy hope, by controlling these two groups on opposite sides of the Gulf of Finland, to keep clear the approaches to Tallinn, and so leave open to their troops in Estonia a way of retreat by sea.

On the other hand, occupation of Riga would enable the Soviet forces to land on the Dago group and use these islands as a base for the motor-torpedo-boats and submarines which are likely to be the transports' most dangerous foes at sea.

H.M.S. BLACK PRINCE, acting with U.S. naval units and backing American land forces, contributed a stirring chapter to the invasion of Normandy. One of Britain's newest cruisers, she steamed close inshore for ten days, pin-pointing targets which ranged from beach pill-boxes to gun emplacements and enemy infantry concentrations inland. Out of 35 specially indicated targets she destroyed 20 for certain. Lower photograph shows the Black Prince, which suffered no casualties and no damage, returning to port, her mission ended ; above, a Wren tests her telephone equipment on docking. *Photos, British Official*

AMERICAN occupation of the island of Saipan, in the Marianas, is now complete, all organized resistance having ceased. From the strength of its garrison, which certainly exceeded 20,000, it is evident that the enemy regarded it as their principal fortress guarding the approaches to Japan from that direction, as well as a major supply base for their conquests in the South-West Pacific. Up to the date of the last report, nearly 16,000 enemy dead had been buried by the U.S. forces, and many more bodies were awaiting burial. Over 1,600 Japanese soldiers and some 14,000 civilians had been made prisoners.

In the course of the fighting, Vice-Admiral Chuichi Nagumo, Commander-in-Chief of the Japanese fleet in the Central Pacific, and Read-Admiral Yano were both killed. Nagumo was in command of the Japanese forces which delivered the surprise attack on Pearl Harbour on December 7, 1941. He was also in command at the Battle of Midway, which marked the turning point in the struggle in the Pacific, and was subsequently appointed port admiral at Sasebo, a naval base comparable to Chatham.

WITH its two airfields and deep-water harbours, Saipan should provide a capital base for combined operations against other islands nearer Japan. In the meantime, aircraft carriers fuelled and stored at Saipan should find no difficulty in carrying out attacks on Japanese ports, regardless of the abominable announcement by the enemy that captured airmen will be killed. Yokosuka, the port of Tokyo, is only about 1,350 miles distant ; and the principal intervening groups, the Bonin and Volcano Islands, have already been heavily raided. (See facing page.)

It does not of course follow that Japan itself will be the next target. An attractive alternative would be the Philippines, which lie some 1,500 miles to the westward of Saipan. With a native population which in the past two years has learned to fear and detest the Japanese interlopers, and would be ready to aid American forces in the event of an invasion of Mindanao or Luzon, the enemy must feel considerable uneasiness in the Philippines.

From the fact that Guam and Rota, two other islands in the Mariana group slightly to the south-westward, have been assailed by gunfire, bombs and rockets, it was conjectured that these may be the next objects of attack ; and as I write, news comes that a landing has been made in Guam, which was an American possession from 1898 to 1941, falling to Japanese assault shortly after the Pearl Harbour raid. Owing to the refusal of Congress to vote funds for its fortification in pre-war years, it was incapable of offering prolonged resistance.

It is the superior sea power of the Allies which here, as in Europe, enables them to threaten attack at various points without the enemy being able to do anything about it.

Owing to the late date at which they were announced, more than five weeks after D-Day, details of Allied naval losses during the great landing in Normandy have attracted comparatively little attention. Yet the very small number of ships sunk is really remarkable, in view of the magnitude of the operation and the elaborate arrangements made by the Germans to cope with it in the way of mines, obstructions and fortifications. Actually these losses comprised six destroyers, four frigates (or in American naval parlance, destroyer escorts), one fleet minesweeper, one trawler and three auxiliaries. Landing craft lost have still to be announced.

WITH the exception of H.M.S. Boadicea, launched in 1930, all the destroyers were new vessels built during the war, i.e. H.M.S. Swift and a sister ship, the Norwegian Svenner (formerly H.M.S. Shark), and the U.S.S. Corry, Glennon and Meredith. This is the second Meredith the United States Navy has had sunk since war began, the earlier one having been lost in action with the Japanese in the South-West Pacific in 1942, and replaced by the present ship.

One of the frigates was of the "River" type, H.M.S. Mourne ; the other three, H.M.S. Blackwood and Lawford and the U.S.S. Rich, were units of the "Captains" type. The fleet minesweeper was the U.S.S. Tide, a two-year-old vessel of 700 tons, and the trawler was the Lord Austin, taken up in the early days of the war for minesweeping duties. The three auxiliaries were the U.S. transport Susan B. Anthony and fleet tug Partridge, and the British vessel Minster, a small cargo vessel built in 1924 for the Southern Railway's cross-Channel service.

No particulars of the sinkings have so far been published, except in the case of the Svenner, which has been torpedoed.

Saipan's Capture is a Bombing Threat to Tokyo

FURIOUS BATTLE FOR SAIPAN ISLAND, Japanese stronghold in the Marianas, in the Pacific, which began with the landing of U.S. troops on June 15, ended 25 days later with complete victory for the Allies. Length and ferocity of the struggle surpassed any other battle previously fought in the Central and S.W. Pacific areas.

On this island, little more than 70 square miles in extent, the Japanese had a garrison of over 20,000 men, the strongest force the Americans have yet encountered on any one occasion since the opening of the Allied counter-offensive against the Japanese in August 1942. Of that garrison 95 per cent perished. American casualties were 2,359 killed, 11,481 wounded, and 1,213 missing.

Prize of the victory at Saipan was the airfield which, less than 1,500 miles from Tokyo (see map), brings the mainland of Japan within bombing range ; hence Saipan's new nickname—" Bomb Tokyo " island. The island's harbours also provide an excellent base for future Allied attacks throughout the Central Pacific. On June 15 and on July 5, 1944, U.S. Super-Fortresses attacked Japan (see p. 189) from bases in the India-China-Burma theatre.

AMMUNITION CASES LINE THE WAYSIDE, part of the great mass of Allied war materials poured into Saipan Island, as troops and vehicles move up (1). Prisoners, taken as the enemy were squeezed from position after position, were marched back to quickly erected stockades (2). Much use was made of " Alligators " or amphibious tractors in bringing U.S. reinforcements from the warships lying off the island ; here one is seen reaching the beach (3), while another lies stranded off shore, its occupants wading the last few yards.

Photos, Planet News, Associated Press

In Praise of the Heroes of the Stokehole

What sort of men are these who, down below the waterline, see nothing of the battle when the destroyer they man is hotly engaged : who labour on though engine-room and stokehold become a scalding inferno and shell splinters hurtle through the confined space like shrapnel ? Capt. FRANK H. SHAW puts these highly-trained specialists of the Royal Navy " on the map."

IT is no longer a matter of thunderously whirling cranks; semi-magical turbines supply the enormous power needed to drive a modern destroyer through the water at a speed approximating to fifty miles an hour. Nor is it a grimy business of hurling tons of Welsh steam coal into the incandescent and ever-hungry furnaces, for the stoker of today turns a tap or two and so adjusts the mixture of steam, oil and air that makes a warship's fuel.

"The sort of job," as a stoker, first-class, told the writer, "you can do in white kid gloves and a boiled shirt !" When the compliments are paid to the Royal Navy a full share should be tendered to the Black Squad, from the resolute and infinitely resourceful chief engineer to the lowliest stoker. The engines and boilers are the real vitals of a ship of war, and on their exact functioning —under all conditions—depends the turn of the scale between victory and defeat.

The men responsible for developing phenomenal power of speed at short notice are highly-trained specialists: trained the Navy way, which makes allowances for practically every contingency. When first recruited into the Service they may be men without the faintest idea of mechanics. The Navy spruces them with a bit of drill, fits them out in natty uniforms to give them self-respect, consigns them to the most arduous, dangerous job existing aboard a ship of war.

DANGEROUS indeed the work is. For in ninety-nine cases out of a hundred, when an enemy attacks or defends itself it concentrates its fire on the machinery of a hostile ship, in the hope of crippling its opponent's furious speed and leaving it a hulk on the surface, to be pounded to scrap at leisure. Similarly, U-boats send their torpedoes as near the destroyer's engine-room as they can aim them, thus hoping to arrest the power that hurls the lean hull towards their destruction. A stopped ship is more or less a useless ship, since gun-fire alone has small power against a submerged foe.

It is hot in the vibrating shell that is a destroyer's engine-room. Men work stripped to the waist, even though ice clings everywhere on deck. There is a constant deafening noise, for only by applying the blowers can the draught necessary to achieve speed be obtained, and blowers are noisy. The motions of a small ship swinging at speed through Atlantic combers are exaggerated below the waterline, and men keep their footing only with difficulty and a sense of awareness. To lose footing might well mean to crash up against hot steel. And, come what might, the engines must keep moving if the bridge so directs.

ON prompt, intelligent obedience to commands might depend the life of the ship and the members of her crew, for a touch on the telegraph may mean an added, lightning-quick burst of speed that will enable the destroyer to escape a busy torpedo, or a quick stop that baffles the aim of a battleship's gunners ready to send a crushing salvo at the hurrying target. Destroyer captains can time the shell flights to a nicety, after seeing the sharp flash of the discharge; and if the Black Squad are reciprocative—as they invariably are—the captain can fling his ship out of the danger-zone before the big shells arrive at their assumed target.

If hit below, the engine-room and stokehold are liable to turn into scalding infernos. A burst main steam-pipe is enough to scald the entire complement to death. Fast-moving machinery—there are dynamos and pumps constantly at work in addition to the turbines—when hit by shell-fragments is apt to throw off clusters of splinters which rage through the confined space like shrapnel. The plating of a small ship is almost paper-thin, and though chilled steel of the highest quality is used, such metal is not adequate protection against high velocity projectiles.

Then, too, the fact that in all probability the hatches are closely battened down, to prevent big water from penetrating below, is prone to create a sort of claustrophobia in the minds of men whose nerves are not of the steadiest. Nothing can be seen of whatever fight is in progress: the engine-room must simply obey orders and put its imagination to sleep until the emergency is past—one way or another !

Damage must be made good if mechanical ingenuity permits. For running repairs it would be difficult to find the superiors of a destroyer's engine-room staff. They can perform miracles. The electrician is responsible for all electric circuits, from those illuminating the gun-sights to the main supplies, and is required to provide alternative lighting in the event of damage occurring to the main supply. Shell-hoists and a host of complicated gear come under his most exacting surveillance.

And Black Squad ratings are quick to assist the "chippy-chap"—the carpenter or shipwright—if the plugging of splinter-holes becomes a vital need. At such times they display an aptitude of improvisation that can not sufficiently be admired. Furthermore, each stokehold rating is a fully-qualified fighting man, adept in the use of rifle, bayonet, hand-grenade and machine-gun—so that if the destroyer has to dispatch landing-parties ashore, the " below-the-waterline " ratings take part with their shipmates of the deck.

The chief of the Black Squad is the warrant engineer, one of the marvels of the Navy of today, as highly-qualified a mechanic as can be found in this mechanical age. Starting in all probability as a stoker, he has graduated up through the various degrees: leading-stoker, stoker petty officer, and mechanician, to his present commissioned warrant rank. Ranking as an officer, he enjoys wardroom privileges. Usually " The Chief " is one of the most warmly welcomed of all the wardroom mess.

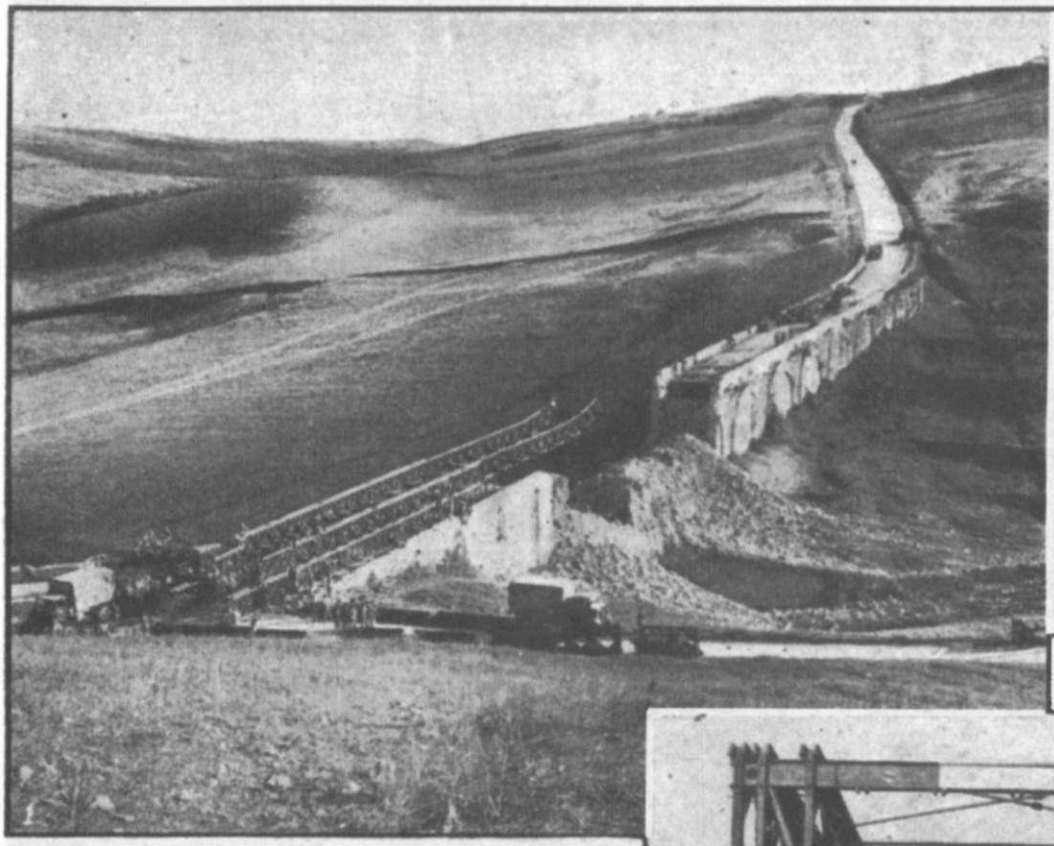
On his own engine-room plates he is lord paramount of his steamy domain, conversant with all his engines' tricks and whimsicalities —as engines that are liable to be savagely overworked are wont to have. Destroyer-engines are unlike the more sober machinery of, say, a freighter—they must be ready at an instant's notice to jump from a crawl to lightning-like haste, and stop dead. The Chief has to assure himself that enough steam is always in hand—since you never really know when the emergency will arise to demand a furious burst of speed. A destroyer acting as escort to a convoy might receive a rapid command from a higher authority to proceed "all out" to an indicated destination, perhaps to salve the crew of a castaway lifeboat spotted from the air, or a shot-down airman. That means subjecting the machinery to a severe test; and if it failed the fault would be laid at the Chief's door.

IT is the Chief who makes steam and keeps the engines moving when the ship has received a savage wound. Imperturbable, amid scalding steam, wounded men and flying debris, knowing the destroyer is likely to go to the bottom with a sudden plunge, he keeps the wheels in motion ; and when the order to abandon ship is given, he stands by —last man below—to cut off the fires and blow down the steam, so that the boilers shall not burst and destroy men struggling in an oily sea amongst the wreckage.

Acts of stark heroism among the Black Squad are uncountable—coolness under fire and in dire emergency seems to be a commonplace. When a deck-man is blown up, he usually falls into the sea ; when a stokehold rating is blown up he is usually mangled in an almost hermetically sealed death-trap. Imagine the horror of seeing the walls of your steel prison suddenly cave in to the impact of a torpedo, followed by a Niagara-like inrush of water, and knowing that the engines must turn until the bridge gives the signal to go ! The courage of Casabianca was trifling as compared with that of the average member of the crew below the waterline.

THE STOKER'S JOB in the Royal Navy has been "cleaned up" very considerably, as told in this page, but there is still dirty work to be done. This member of the Black Squad (left) is probing the tubes of a ship's furnace with a ribbon brush; soot is collected and emptied into special containers (right). *Photos, British Official*

The Bailey Bridge that Triumphs over Demolitions

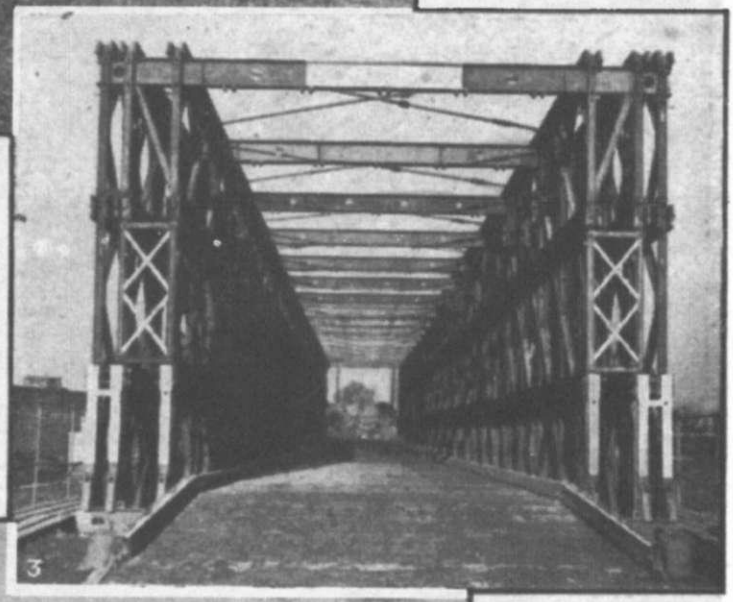


Mr. D. C. BAILEY, O.B.E. (2), who has designed every bridge but one in current Army use.

OVER THE ENORMOUS GAP which German demolition squads had blown in this bridge in Italy, our men and heavy armour were soon speeding in pursuit of the enemy—across a Bailey Bridge, the nose of which is here seen (1) about to be launched.

FROM A ROUGH SKETCH on the back of an envelope was evolved a piece of equipment which has revolutionized bridge-building for our armies in the field, speeding their advance in North Africa, Sicily, Italy and Normandy. This Bailey Bridge—praised by General Montgomery as "Quite the best thing in that line we have ever had. It does everything we want. It will be needed everywhere we operate in Europe"—was invented by Mr. D. C. Bailey, of the Ministry of Supply.

Designed to cross gaps up to 240 ft. without the help of pontoons, in conjunction with these the span is lengthened considerably. In its lightest form the Bailey can carry 20 tons; construction can be doubled or trebled to take our heaviest tanks. Fitting together like a jig-saw puzzle, each section is ten ft. long and has seventeen parts. Nine other parts are used for the bridge foundation.



TRIPLE TIER specimen (3) In the first stage in bridging a gap the Bailey is built on rollers on the bank, each span as completed being pushed out and over. Only one steel pin is required for each join.

UNDER FIRE from enemy guns our Royal Engineers finished the approaches to this Bailey Bridge (4) which they had thrown across the Caen Canal in record time. The heaviest part can be handled with ease by six men. The American Army have adopted the idea, using it as standard equipment under the name of the Panel bridge, and components of British and American-made bridging can be interchanged. When the bridge went into mass-production in England all kinds of firms co-operated including makers of bedsteads, window-frames, paper, canoe-paddles, and a greenhouse manufacturer.

Photos, British Official; Daily Express

2nd Army Infantry Stormed this Nazi Bastion

FIERCE BOMBARDMENTS by artillery, aircraft and naval vessels preceded the capture of Caen in Normandy on July 9, 1944. The Germans themselves did their utmost to ravage wantonly before they were driven out. Besides normal military demolition, they ruthlessly destroyed the contents of many historic buildings. Above is a view over the rooftops of Caen after the battle.

TREADING WARILY because of the possibility of stepping on undiscovered mines which the Germans sewed thickly in the streets, more British troops (left) enter Caen to consolidate the hold they had won.

MAIN STREET in the captured city (below), showing rows of buildings still standing after our terrific bombardments. It was estimated that, in spite of the danger to themselves, 30,000 inhabitants remained, awaiting their hour of deliverance.

Photos, British Official

Hunting Out the Lurking Hun in Shell-Torn Caen

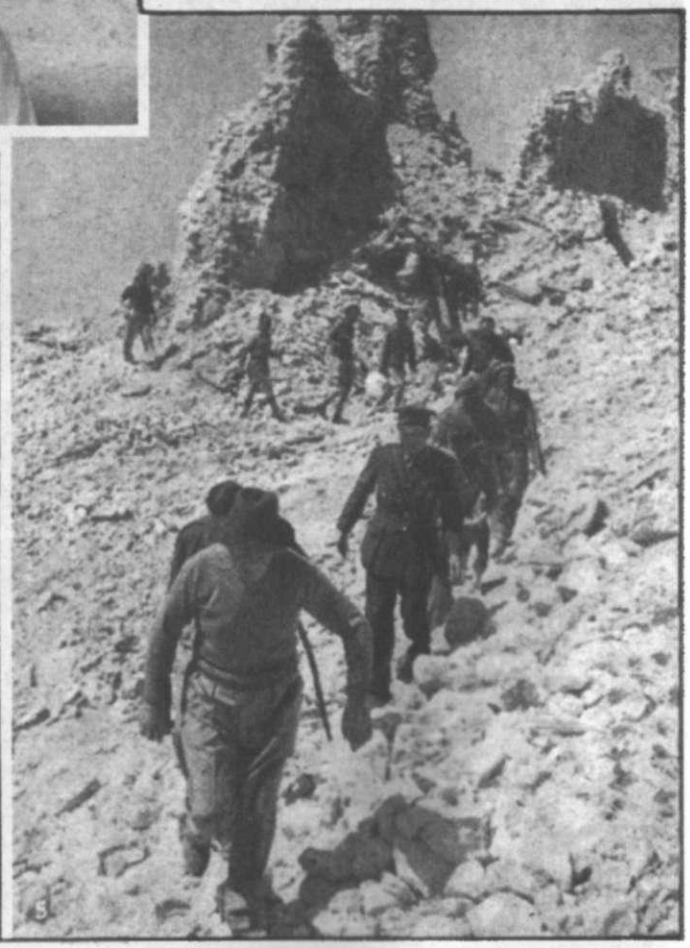
HUB OF TWELVE MAJOR ROADS of great military value is the key-town of Caen, capital of the Calvados department of Normandy. Defended fiercely by the Germans since our first landings, it finally fell to British and Canadian units. In the course of the battle the town suffered extensive damage and the retreating enemy left its streets heavily mined ; here a British patrol is searching a debris-strewn thoroughfare for lurking snipers. In the background is the tower of the 14th-century cathedral of St. Pierre.

Photo, Associated Press

New Zealand's Premier Sees His Troops in Italy

THE Right Hon. Peter Fraser, Prime Minister of New Zealand, it was announced on May 20, 1944, travelled to Italy specially to meet and congratulate the men of the renowned New Zealand Division which had served in Libya, Egypt, Greece and Tunisia, as well as distinguishing itself in Italy. Mingling with his troops, who greeted him with cries of, "It's Peter Fraser—good-day, Pete!" the Prime Minister thanked and shook hands with hundreds of them.

In an extensive tour he saw for himself the impressive quality under field conditions of this famous Division from his home country. Later, on June 10, he visited Rome, first member of any United Nations Government to enter the freed city, and had audience with the Pope, who sent his blessing to the people of New Zealand. Returning home, he paid high tribute to the people of Southern England for the way they were standing up to the flying bomb ordeal.



GATHERING THEM IN GROUPS ABOUT HIM, Mr. Fraser thanked the men wherever he went (1), and during his tour saw some of New Zealand's fierce-fighting Maoris (2). The Premier sat on the beds in Army hospitals chatting to the patients (3). In an armoured car with Major-General Sir Bernard Freyberg, V.C., K.C.B., D.S.O., G.O.C. of the New Zealand Division (4, left), Mr. Fraser (right) went to the fighting line; he also visited the ruins of Cassino Monastery (5). The Dominion's armed forces have already won 7 V.C.s in this war. *Photos by courtesy of the New Zealand Government*

Town After Town Falls on the Road to Florence

SIENA—IMPORTANT BASTION in German defences before Florence, and a medieval Italian town of great historical interest—fell to French troops of the 5th Army on the morning of July 3, 1944. French native troops, leading a mule train, wind along a road just before the final assault (1). Leverage for the Allied successes at this stage was effected by the 8th Army who, it was announced on June 19, occupied Assisi, 60 miles south-east of Siena. In that town a British soldier passes under an arch, behind which is the church dedicated to St. Francis of Assisi in 1253 (2). Another 8th Army step was the capture of Castiglione in the same area, on June 26, where our infantry are here seen (3) mopping-up on a street stairway. Ancona, on the Adriatic coast, fell to Polish units on July 18.

Photos, British Official

Bulldozing to Victory on All Fighting Fronts

The driver of this astonishing mechanical navvy, which carries no armament, is open to be shot whilst he gets on with his task of levelling an airstrip, cutting a road, smashing a track through a forest, filling bomb and shell craters, pulling a store-laden sledge, hauling equipment up a cliff or assaulting enemy pillboxes. ROBERT DE WITT here tells something of the story of the diesel engined 400 h.p., 22-ton bulldozer and its smaller versions.

THE ingenious foreman of a road gang got the idea, a few years ago, that the powerful tractor he was working would be more useful if it had fixed in front of it a flat metal shield which would enable its full power to be applied to pushing loose earth to one side. He asked his firm's blacksmith to fix it for a trial, and thus the bulldozer was born.

Today there are thousands of bulldozers on every Allied front. The machine has shown that although it carries neither armour nor guns it is a weapon as indispensable to a modern army as tanks and artillery. At the beginning of this war it was considered a "behind the lines" vehicle, a machine for preparing fortifications quickly and for clearing up the rubble when the army had gone through.

Now it is a front-line weapon, not following the tanks and guns but in many cases clearing the way for them. In the fighting in Italy the bulldozers have again and again been right in the front, pushing aside rubble from houses dynamited by the retreating Germans to make roadblocks. For the landings in Normandy bulldozers were loaded so that they could get ashore first and clear a way up the beaches for tanks, trucks and men and supplies.

BULLDOZERS have developed considerably from the crude pushing affair devised by Roy Choate. They have become more and more powerful, and fitted with controls that enable the pushing shield to be lifted and its angle adjusted according to the task in hand. The biggest bulldozers now have diesel engines developing more than 400 horse-power. They are very strongly made, able to take a tremendous amount of punishment from rough work without being any the worse for it. The largest weigh over 22 tons and are able to push around several tons of earth or rubble, doing the work of a hundred or more men quickly and neatly.

To show the punishment these vehicles will stand the case of half-a-dozen that took part in the landings on Attu in the Aleutians can be quoted. The work of these bulldozers was to push a road across a valley to get urgent supplies to the troops. The bulldozers were on top of an almost precipitous mountain. They were wanted in the valley below, immediately. Engineers decided there was only one way to get them down in time—topple them over and let them roll. Six of them were sent driverless over the edge. They turned over and over all the way down. Not one was put out of action! Those that landed right way up were driven off at once. Those that landed upside down were righted and, although somewhat battered in appearance, were perfectly fit for the task they had to do.

The tremendous power of bulldozers explains to a considerable degree the speed with which recent landings in the Pacific have been consolidated and exploited. Their work is not limited to levelling-out airstrips, filling bomb and shell craters, cutting roads. They are used as powerful tractors, capable of pulling enormous quantities of stores on special or improvised skids. They can bulldoze landing ramps and push out earth and rock at a bridge-head to give a firm foundation. They can pull equipment up cliffs by means of cables and winches. They have even been used for tearing up roads covered with anti-personnel mines, simply churning up the earth and pushing it aside. They are amongst the most adaptable machines ever invented, and in the hands of a skilled driver there seems to be nothing that man or horses could do that a bulldozer cannot do in one-hundredth the time.

As it carries no armament you would not think of the bulldozer as a weapon of offence. Generally the drivers have to sit in rather an exposed position and just be shot at while they get on with the job. Scores have been killed and injured while working their bulldozers within view of the enemy. It is no surprising that when they get their chance they like to get their own back.

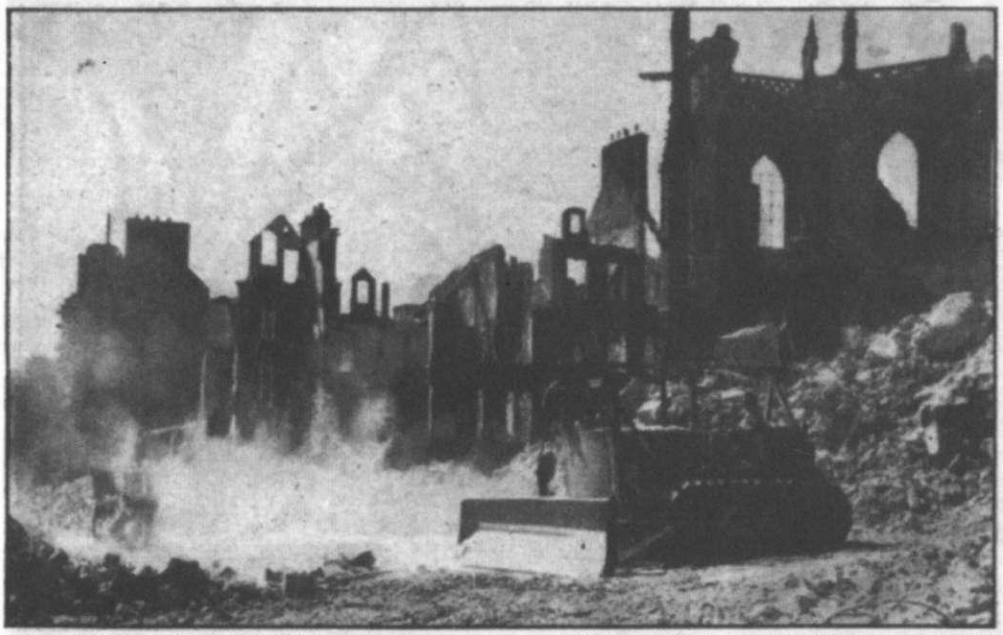
In one of the Pacific landings some Japanese snipers were giving a lot of trouble from their concealment in foxholes. The driver of a bulldozer saw his chance. With covering fire to keep the Japanese down he approached, the roar of his engine unnoticed in the noise of battle. At just the right moment the metal shield dropped down, pushed out the right amount of earth and killed and buried the snipers in one motion.

PERHAPS the most fantastic assault on a pill-box ever made was carried out by Royal Engineers using a bulldozer on the Normandy beaches. A deeply dug-in pillbox manned by resolute Germans was holding up our troops, its machine-guns sweeping the beach. The bulldozer was taken round to the "blind spot" of the pillbox. Then it picked up earth and began to angle it into the loopholes. One after another the loopholes were completely blocked by feet of earth. That pillbox was finished, and the bulldozer returned to more prosaic but not less useful work in clearing the beaches for vehicles and stores to come ashore.

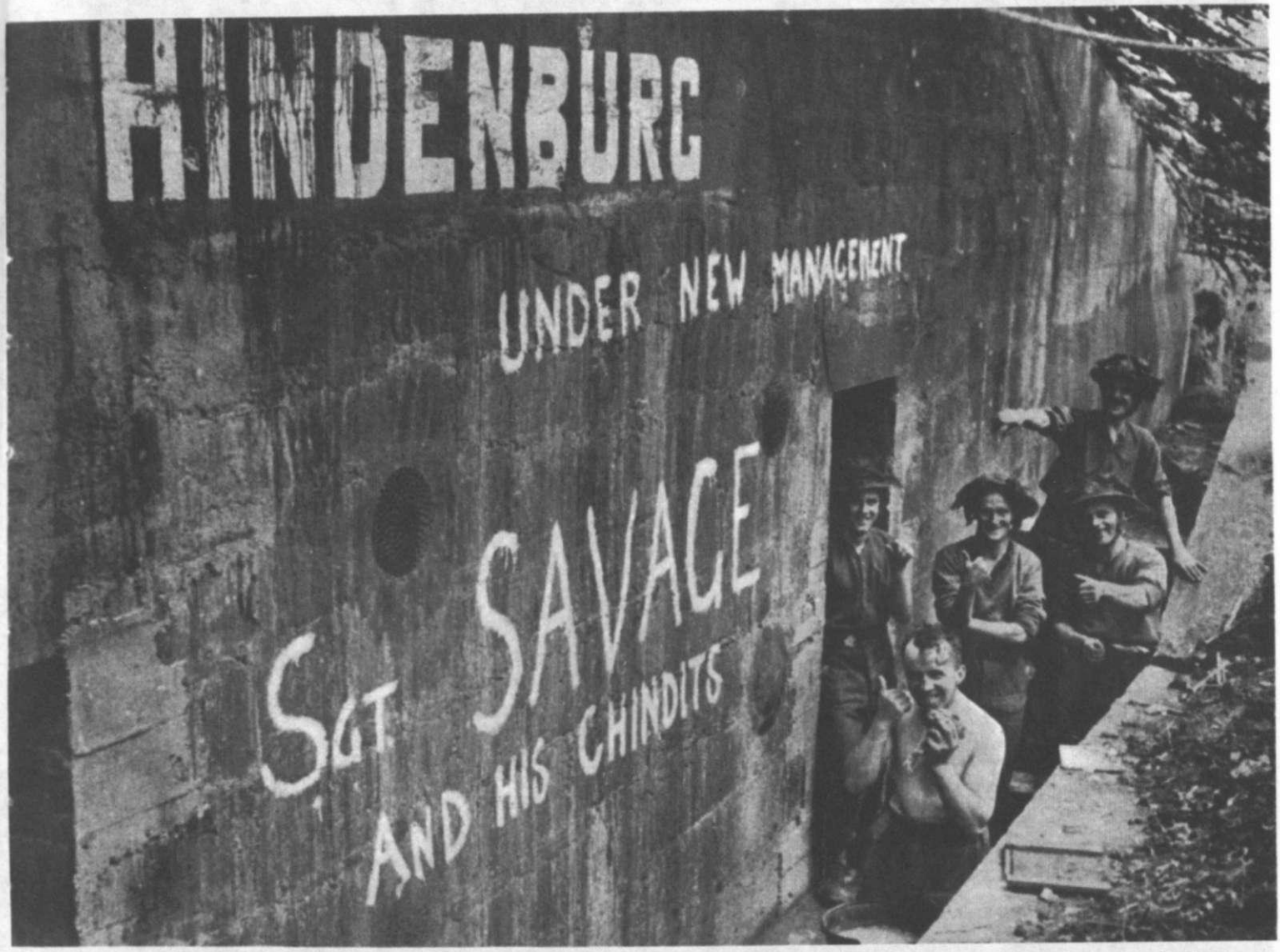
There are few parts of the world now in which bulldozers are not working for the Allies, and it would be difficult to overestimate the value of the enormous manufacturing capacity for these machines which exists in the United States. It was bulldozers, pulling out trees by their roots, pushing earth and rock into embankments and out of cuttings, that enabled the Alaskan Highway to be built in record time. The original Burma Road was built by some ten million labourers working with baskets and the most primitive tools. The new road-link with China will be built faster with the aid of bulldozers that stand up to the Tropics as well as they do to the Arctic.

Correspondents report that the sensational advance of the Russians in Finland was largely due to the bulldozers which, accompanied by tommy-gunners, laid broad tracks through forests along which more men and machines could be brought up at unexpected speed. The Germans have no machines, either in quality or number, to compare with those going into action for the Allies. These machines are part of the explanation of the speed with which German demolitions and roadblocks have been negatived in Italy and France. The powerful throb of bulldozers at work was heard immediately Cherbourg surrendered.

IN Britain we see these machines levelling aerodromes and making new railway sidings at almost incredible speed. Some have put in "overtime" clearing sites for post-war building estates. The machines are familiarly known as "dozers" or "cats." The latter name comes from the caterpillar tracks which are an essential feature. The "bulldozer" is rather less obvious. The business of catching and throwing cattle for branding on ranches in America has long been called "bulldozing." It is hard, sweating work, and apparently the similarity between it and pushing tons of earth around struck the first users of these mechanical navvies. They christened their machines "bulldozers" and the name has stuck.



CLEARING TONS OF RUBBLE from the streets of war-blasted Valognes, in France, a bulldozer works with speed and power undreamed of in the old pick-and-shovel days. Immediately an enemy position is taken, bulldozers commence to clear roads through the debris of artillery and aircraft bombardment to facilitate our swift advance. Other mighty tasks they perform are described in this page. *Photo, U.S. Official*



Conquests of 2nd Army in Normandy

Organized by Field-Marshal von Rundstedt, German "West Wall" defences were burst asunder in the first onrush of the Allies against the Normandy beaches. Formidable strongpoint was the Hindenburg Bastion, enormous concrete emplacement with elaborate system of trench communications. But this was soon under new management, as emphasized by chalked comments of the British Bofors gun crew who made themselves at home therein (above). Within 30 days of the landings, 1,313 square miles of France had been liberated. Specially fierce was the fighting in the Tilly neighbourhood when, on June 26, 1944, possession of villages was contested house-by-house: a British patrol pause for observation in St. Mauvieu (right).

Photos, British Official

2

3

4

5

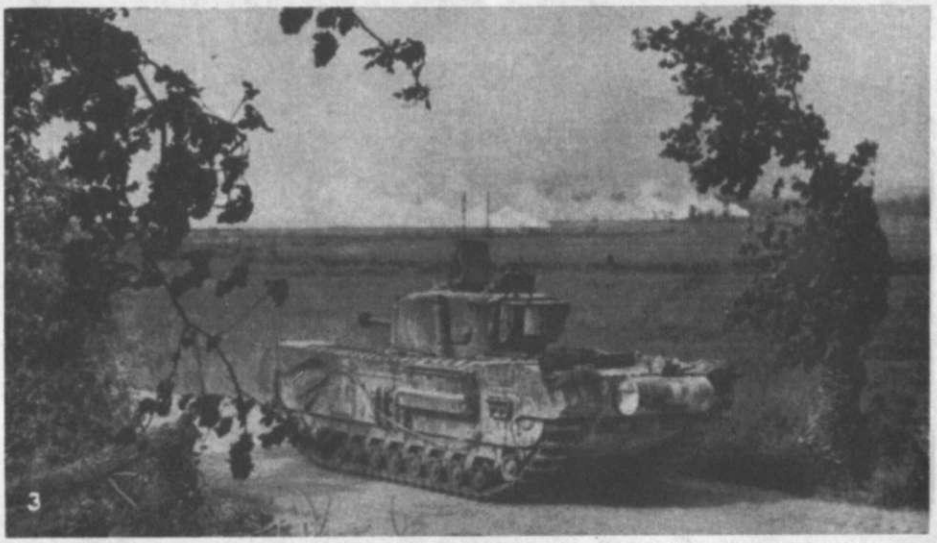
British Infantry and Armour Pressed on to Caen

Photos, British Official

Churchill tanks co-operated magnificently with British and Canadian infantry of the 2nd Army in the great break-through towards Caen—hinge of Rommel's right flank (until captured on July 9) and strategic gateway to Paris: waist-deep in undergrowth troops follow in the wake of a Churchill crashing through a hedge (1). Our armour passes a knocked-out enemy Tiger tank near Rauray (2). Churchills leading, infantry advance to the attack through a cornfield (3).

In the Wake of Battle Refugees Return Home

British guns in action (4) during the heavy artillery preparation for our attack in the Tilly-Caen area. The tide of battle has barely receded when refugees return to their homes—or what is left of these. Troops in occupation add to their sympathy ready aid: a cartload of family possessions is helped along the churned-up road of Cheux village (5), between Tilly and Caen, shortly after the British-Canadian fighting line had passed beyond on June 27.



8th Army Leaves Rome Far Behind

Within 24 hours of the Allied entry into Rome, columns of the 6th South African Armoured Division swept through the city to become the spearhead of the advance towards Florence : their Recce carriers passed through the gateway of Orvieto (2), 70 miles beyond Rome, on June 14. British 25-pounders hastened in pursuit of the enemy through Allerona (4), 90 miles north of Rome, captured on June 19. A day later, 8th Army troops entered Perugia (1), 100 miles to the north; the 16/5th Lancers led the column, and attacking infantry included men of the Rifle Brigade. Churchill tanks (3) were used for the first time in Italy on May 17 : so excellent was their work in support of the Canadian Corps when the latter broke through the Adolf Hitler line that the Canadians, as a privilege, requested the brigade concerned to " bear the Maple Leaf on their tanks."

Photos, British Official

VIEWS & REVIEWS

Of Vital War Books

by Hamilton Fyfe

Wingate of the Chindits

I BELIEVE that most people, when they hear on the wireless about what "the Chindits" are doing in Burma, imagine them to be native levies. The sound of the name seems inevitably to suggest that. The late General Wingate, who coined it for the force of irregulars he trained and led, took it from the mythological beast, half-lion, half-griffin, of which images stand outside Burmese pagodas to keep off devils. This is called "Chinthey." He meant it to symbolize the co-operation between ground and air forces. How effective that co-operation is, how the force is able to do without lines of communication, which would be next door to impossible in jungle country, and how skilful the R.A.F. pilots are in landing supplies of every kind on very small target grounds, I understand far better now than I did before I read Mr. Charles J. Rolo's book, Wingate's Raiders (Harrap, 8s. 6d.). It gives a fascinating, fully detailed account, based on the stories of Major J. B. Jefferies and Squadron-Leader R. Thompson, who took part in them, of the "raids" which caused the Japanese so much trouble and so much anxious uncertainty last year, and which have now developed into a regular and most valuable feature of our military operations in the Far East.

Wingate's methods were the same in Burma as they had been in Abyssinia, where he organized the force which went with the Negus when he re-entered the country. He attacked only when and where it suited him. In pitched battles that might go on for a long time his Chindits would have been overwhelmed by numbers, would have had no chance of success. So what he did was to "bedevil the Japs with murderous nocturnal forays and lightning daytime raids." His men surprised the enemy over and over again; struck hard and, before they had recovered from the shock, were off again, nowhere to be found. "Times of darkness, mist and storm" were what he wanted.

His men trusted him absolutely. He never set them impossible tasks. He made them do things that were intensely difficult, but his imagination showed him that they were things which could be done. He insisted on the necessity for imagination in a military leader. "Every military operation," Wingate held, "must be seen as a whole, as a problem in time and space, pictorially. There must be scrupulously accurate realism in its details. Most commanders' minds present them with a series of pictures showing their troops moving victoriously from point to point. These pictures are completely bogus." How many of the catastrophic retreats in which I participated between 1914 and 1918 could have been avoided if British and French, Russian and Rumanian generals had possessed this gift of "an anxious, meticulously accurate and ever active imagination."

BUT Wingate thought, too, there is always an element of luck in a leader's success or failure, and that an unlucky general must be sacked, "however good a general he may be." On that principle Mr. Churchill has acted more than once. It is perfectly sound, hard though it may be on individual commanders. Troops will not fight their best for men they do not believe in. Every one of the Chindits put every ounce of himself into whatever he was told to do because he felt certain that Wingate knew it was the right thing, the only thing to be done in the circumstances.

The hardships they went through were colossal. Often they were very short of food. They had to swim rivers or cross them in dug-outs with enemy bullets flicking all about them. They sometimes struggled through tall, tough, prickly elephant grass at the rate of a hundred yards an hour. Diseases weakened and killed them, though they were kept fairly free of malaria by sweating hard—one of Wingate's hunches; "he made us sweat all right!" they said. Ticks and lice, and red ants up to three-quarters of an inch long and "with a needle-sharp bite" made sleep uneasy, if not impossible. A king cobra might suddenly rear up from the ground to one-third of his fifteen-foot length, swaying from side to side, poised to strike. Scorpions hiding under stones which men moved to clear sleeping-places inflicted nasty bites. They always had to be on the alert for herds of wild elephants.

WHEN they got out after their expedition had taken them within a hundred miles of the Burma Road, which was so badly needed as a highway for supplies to China, and after exploits more exciting and more perilous than any that were ever invented by boys' story-book writers, they were a pitiable sight. They had set out strong, hearty, well-muscled. Now muscles had become stringy tendons, arms and legs were emaciated, stomachs caved inwards, ribs stuck out. Some were partly deaf, others scarcely able to speak—effects of starvation. They had eaten roots, which tasted good but had no staying power. They had cut up and grilled snakes of the python variety, which "tasted rather like fish." They were "bare-footed, bearded, wearing foul-smelling rags," when five of them staggered into a group of spruce-looking British officers having tea. They had got out, an operation far more difficult than getting in; and they had done it only just in time.

WHAT had they accomplished? Most important of all, they had staved off the invasion of India. They had shown that in jungle fighting we could do better than the Japanese. That had given the enemy something to think about; it had also helped to bring many Burmese round to a belief in Allied victory, which made them more ready to assist us. On the whole, the Burmese were friendly. I know there are those who feel that if when their Premier, now the chief Japanese quisling, came to London in 1940, to ask that his people might have self-government—if we had then met him in a more accommodating spirit, and if at the same time we had decided to take no chances with the French in Indo-China, the Japanese might never have entered Burma at all—and we might not have lost Singapore. On the other hand, that quisling U. Saw is known to have left a very bad impression on all who had contact with him during his London visit, and these may be no more than the "ifs" of History which make it so interesting a study.

With a man like Wingate, however, directing our strategy, such possibilities cannot be ruled out. That is why his accidental death was such a heavy loss to us. He was everything the usual kind of British officer in the past has not been. He had very wide interests. He would talk on almost any subject. He was, like a good many men who have excelled in war, firmly religious, though not sectarian. He quoted the Bible a lot, because he had been brought up on it, and because it, like Shakespeare, contains something suitable for every occasion. But he thought there was good in all forms of faith in the unseen—and would, no doubt, have admitted something bad as well. He was very strong physically, tough in constitution as well as muscular and hard. He had no respect for big-wigs of any kind. He had endless rows, of course, but he could throw off their effect with a grin and a cheery "I'm not really as crazy as people think." He did not smoke, because once he gave it up for a year in order to save money for a trip to the Libyan Desert and found himself fitter without cigarettes; but he liked good food and good wine, though he believed one could not really enjoy them unless they had been earned by periods of hardship.

He made an immediate impression on Mr. Churchill and on Field-Marshal Wavell, whereas the reaction of Haig to him would have been "Impossible bounder!" and that of Mr. Neville Chamberlain "Very odd uncomfortable man!" Not a great leader, for the reason that he did not have the opportunity to cope with a great task; but one who would pretty certainly have shown greatness given the chance.

The late Maj.-Gen. ORDE CHARLES WINGATE, D.S.O., creator and leader of the Chindits, is here seen (facing camera) with some of his Chindits at an outpost on the Assam-Burma frontier. Exploits of this almost legendary figure are described in the book reviewed in this page. (See also pp. 46-49, Vol. 7.)

Photo, Keystone

How Our Dogs Detect Land-Mines in France

ONCE HOUSEHOLD PETS, many of Britain's dogs, already carrying out important work with our Forces in the field (see pp. 22-23) are now engaged in the exacting task of locating land mines, particularly a new type being used by the Germans, the wooden-cased " shoe mine " which was designed to escape ordinary means of detection.

At a training school the dogs learn to nose-out mock mines from the scent of meat laid beside them, and in due course acquire the urge to seek them out without the attraction of meat. In France they are helping to clear large mine-laid areas.

The dogs at work on leads held by soldiers ; each mine found is marked by a white cone (1) for later attention. A dog points out a mine (2), and a few more discoveries are added to the bag (3). During morning medical inspection, a dog receives attention (4) for an injury received in the course of its duties. Regular exercise is part of their life (5). Under good conditions 20 dogs can clear a 16 yd. wide lane at a speed of 200 yards in half an hour.

Photos, British Official

Here Our Armour Outfought Rommel's Panzers

AFTER THE GRIM TANK CLASHES which preceded the capture of Caen on July 9, 1944, British tanks are here seen halted in a street, while an anti-tank gun unit sets up at a corner. Engaged in the Normandy fighting was a new British type, the Cromwell tank, which has a 75-mm. gun and a special high-capacity engine; further hitting power was given to Allied armour by American-built Sherman tanks recently fitted with the famous British long-barreled 17-pounder gun.

Photo, British Official

Anti-Aircraft Command's Detectives at Work

Behind the announcement that our A.A. guns have shot down enemy planes or flying bombs lies a story of keen detective work by Intelligence Officers who investigate success claims sent in by batteries and apportion credit between friendly rivals. The following account of this by no means easy task was given to "The War Illustrated" by A.A. Command Headquarters.

GUNS can shoot at planes seven miles away. If they score a hit the plane may limp on, or glide into the next county. Or, as often happens, it may come down in the sea. How are the gunners and A.T.S. to know whether they have scored a "Cat One" (plane definitely destroyed), a "Cat Two" (plane damaged so seriously that it probably failed to return to base), or a "Cat Three" (plane damaged)? How are they to know that the wreckage which a farmer finds in his field is the plane they engaged, or one shot down by guns 20 miles away? Or perhaps one shot down by a night fighter?

The Intelligence Officer must find out. He must link up shooting with wreckage. If all planes fell close to the gun sites which fired at them it would be easy. If targets could be followed by camera from the first order of "Fire," the evidence would be conclusive. But there are a hundred and one snags.

The first place the I.O. makes for is, naturally, the site claiming a kill. He takes statements from eye-witnesses. For a Cat One where the raider or its wreckage cannot be found, he must find two independent witnesses who will say they definitely saw the plane falling in flames. Then he may call on police, Royal Observer Corps posts, A.R.P. wardens, fire watchers, coastguards, naval officers, and any others who may possibly have seen the engagement.

Interrogation of witnesses must never be left to inexperienced questioners, or the claim may become confused, or left till it is too late to get the missing pieces needed to complete the evidence picture. If he does not trace the witnesses quickly they may have gone home to bed, or they may be shift workers who cannot be found for hours. Here are some typical instances of an I.O.'s search for the story to back up the guns' claims.

Six Focke Wulf 190s swept in over a certain S.E. coast town, and thanks to our guns and fighters only one went back to France, damaged. Light gunners saw their shells blow the tail off one over Deal, and down it went into the sea. Everybody, including coastguards and police, saw it, and there was no mistaking a certain kill.

The gunners claimed another, but the A.A. Intelligence Officer couldn't immediately find anyone who would state they saw it hit by shells and come down. An hotel keeper said he saw both planes hit, and men on searchlight sites said they were certain the guns got it. The I.O. went from one witness to another. His search took him to a range where firing was in progress, and rather than delay his search for evidence he risked a dash across the fields during salvos, and collected statements from gunners. Eventually he obtained the full report. It was a week before two swastikas went up on the guns' scoreboard, with three to the R.A.F.

AT Hastings, one Sunday, twenty raiders came over during lunch-time. A policeman on point duty vouched for one being hit by A.A. shells, and his statement brought a Cat One when added to others. It took twenty-four hours to track down another claim, based on one plane being seen to break away from its formation and lose height going out to sea. The I.O. questioned passers-by every 200 yards along the streets. Eventually a Cat Three was awarded.

An I.O. watching an action over Dover saw a red glow in the clouds, then a splash in the harbour. Everyone said it was an oil bomb. Next morning the I.O. went down to the quay and said to the skipper of a minesweeper: "Will you look out for plane wreckage and let me know if you see anything?" At four in the afternoon the boat returned with a flying suit, a pilot's log in German, and nine oxygen bottles. It was enough. Another Cat One for the guns.

Who shot the plane down is sometimes a tricky question. Several sites may fire during the same few seconds, and shell-bursts are seen enveloping the target. Whose shells did the trick? Every battery is keen to chalk up one more Nazi on its scoreboard, and there is keen rivalry. Sometimes it is possible to decide this on action reports by sites. They all keep a log of the exact time their shells leave their gun barrels, and the instrument operators can say exactly in which direction, and when, the target starts

GENERAL SIR FREDERICK A. PILE, K.C.B., D.S.O., M.C., G.O.C.-in-C. Anti-Aircraft Command since 1939. Aged 59, he entered the Royal Artillery in 1904 and served in the 1914-18 war. From 1937 to 1939 he commanded the 1st A.A. Division of the Territorial Army. *Photo, Topical Press*

to lose height. But the enemy pilot may lose height purposely to fox the gunners, to make them think he has been hit, so they will leave him alone. As he loses height a badly placed round luckily gets him. So many things are possible!

IT is not enough for a captured Luftwaffe pilot merely to state that his plane was brought down by A.A. fire. This information would seem to the layman to be all that was necessary to give an award to the guns making success claims at the time, but some German flyers are so proud of their skill in the air that they won't admit having been shot down by an R.A.F. night-fighter. Their attitude is that a hit by A.A. fire is just a matter of bad luck, to be dismissed as such. This verbal evidence from prisoners is never accepted by the I.O. He seeks out the wreckage and makes up his report only from what he sees and can find out from the shell splinter holes or bullet strikes.

In a raid early this year the official score sheets of enemy bombers destroyed over Britain showed that Anti-Aircraft Command and the R.A.F. were each credited with half of one particular raider. The pilot baled out, not far from London, from a bomber which had been engaged with 40 rounds of A.A. fire at 11,000 feet. When captured, he claimed that he had been shot down by flak, and showed a splinter wound in his heel to prove it. But when his aircraft was examined, the strikes of a Mosquito's cannon shells were also found. So there was nothing for it but to share the kill—half a bomber each way.

Frequently the factors to be taken into account in assessing A.A. claims after a raid are so involved that definite awards to gunners on the ground cannot be granted to an individual gun site. On February 20, for example, during a two-phase raid on London, a Ju. 88 crashed in a suburban area. A very large number of heavy A.A. sites and Home Guard rocket batteries had been engaging the raiders and there were no R.A.F. claims. The award was granted to the London A.A. defences as a whole.

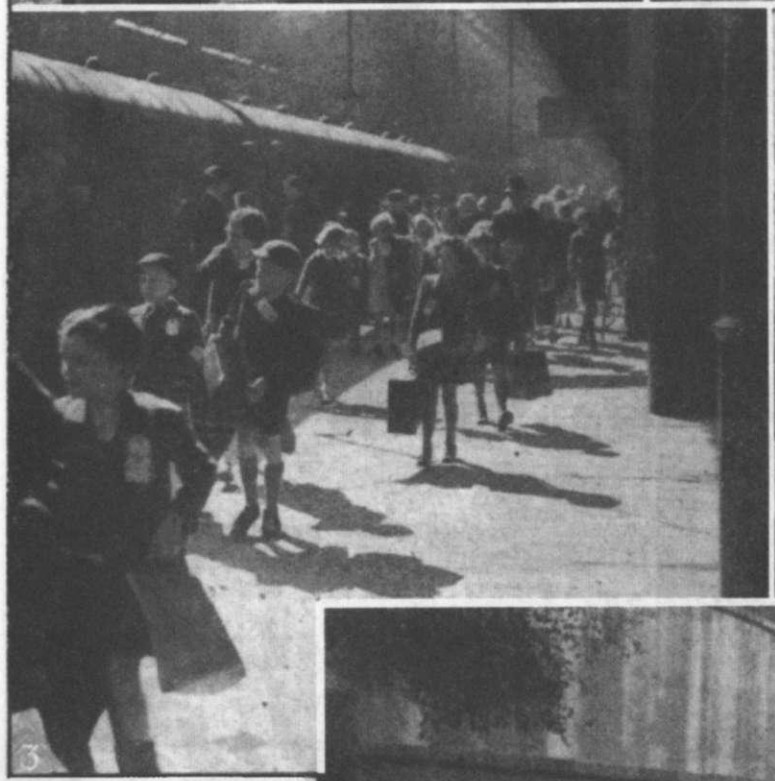
A SINGLE Ju. 88 over the south coast in the middle of April this year caused a lot of work when the I.O.s investigated its crash. The raider dropped no bombs and committed no "hostile act" at all, but in the early morning light it circled around in the mist on a sortie which no one could define. It was the only daytime raider that day. It was destroyed, but not until six days later was the award finally granted. The following A.A. troops were then credited with half a "Category One": An all-male heavy A.A. battery, a mixed heavy A.A. battery, a light A.A. battery (Bofors guns), a searchlight battery (machine-guns). The other share went to R.A.F. fighters.

This matter of delay in settling claims when verification is difficult had an amusing sequel shortly after the first American A.A. batteries were deployed in Britain's air defence system. They had been fighting extremely well on several nights without securing a longed-for "Category One" success. However, on April 19, just after midnight, when three enemy planes were accounted for by A.A. fire, a U.S. battery at Dover claimed to have hit one of the raiders. Together with the British regulars at Dover they were awarded a half share in a "Category One," thus making history in American records as the first official successful engagement with a German plane over Britain.

The difficulty came when, two days later, a claim from a U.S. battery in London was verified, resulting also in a share, for another plane shot down on the same night. There was nineteen minutes difference in the two engagements—and the Americans in London had actually scored before the Yanks at Dover, but the former took more investigating than the latter. Strangely enough, a third U.S. battery, at Folkestone, got a Cat Three that same night.

Up to the time of writing, since the beginning of the war Anti-Aircraft Command has accounted for 831 enemy planes shot down, 236 probably destroyed, and 420 damaged. Of these 70 have been definitely destroyed by the guns alone since January 1, 1944. Proof of all these successes has been established by A.A. Command's Intelligence Officers. But to assess the value of anti-aircraft guns in a defended area only in terms of planes shot down or damaged is an underestimation of their power, for it is also part of the role of anti-aircraft defences to prevent bombers from being able, accurately, to approach their targets in bombing runs. Many a German raider has been forced to turn back without ever reaching even the fringe of the capital. Anti-Aircraft Command's success in this role of defence could never be gauged by its Intelligence Officers; only the Germans would know! But the Germans are left guessing as to how many of their flying bombs are shot down over Southern England by the gunners of A.A. Command!

Our Plan of Campaign against the Flying Bomb



HITTING BACK at the flying bomb, with which, on June 15, 1944, the Germans began to attack London and Southern England generally, Air Defence of Great Britain lost no time in coping with the menace. As early as August 17-18, 1943, the important German research and experimental station at Peenemunde, on the Baltic, had been attacked. R.A.F. fighters soon perfected their attack technique which destroyed flying bombs, while A.A. fire added its quota, and new methods of deploying barrage balloons were adopted. After a flying bomb patrol, an Intelligence Officer (right) takes notes (1). A.A. men drag in a "kill" (2). Evacuation of London's children began again on July 3, 1944 (3). Air Marshal Sir Roderic Hill, A.O.C. Air Defence of Great Britain (4), who himself took part in the fighters' operations against the flying bomb. London's first new deep shelter opened on July 9, 1944 (5).

Photos, British Official: Crown Copyright; G.P.U., Keystone, Planet News

China Enters 8th Year of Her Fight for Freedom

JAPAN STRUCK at unprepared China on July 7, 1937—and for seven long years, regardless of all sacrifices, China has fought valiantly against a better equipped foe.

Training in the use of firearms is given to Chinese recruits by U.S. instructors (1). Part of the Ledo Road (2), which Allied engineers have driven from Assam across the Patkai Range into the Hukong Valley in Burma, eventually to link up with the old supply route to China, the famous Burma Road. Early in 1944 Madame Chiang Kai-shek (3—centre), wife of the Generalissimo, opened a War Orphans Home near Chungking. Chinese troops, seeking out the enemy, ford the Tanai River in Burma (4).

2

3

4

I WAS THERE! Eye Witness Stories of the War

Over Caen I Saw the Flag of Freedom Raised

British troops fresh from battle formed a guard of honour in the square outside the grammar school of Caen, in Normandy (captured by the 2nd Army on July 9, 1944), and presented arms as the flag of De Gaulle was hoisted. The historic event was witnessed by George McCarthy of the Daily Mirror.

I THINK that hastily improvised ceremony was the most impressive I have ever seen. Outside there were gathered a crowd of French civilians—soldiers of the resistance. The guard of honour was provided by half a company of British troops; not tall Guardsmen chosen for the pomp of ceremonial, but tough little fighting men with the dirt of battle still on their boots and their battle dress. The resistance leader blew a whistle. We all fell silent. He gave an order and his little troop came to attention. A British command rang out. The troops presented arms.

The tricolour emblazoned with the cross of Lorraine was hoisted. It stuck half-way. And perhaps that was a symbol, too, for 3,000 French civilians have died in this battle to set a people free. The resistance leader spoke again. He beat time and we all sang the Marseillaise. There was no music and we were a little flat and off the tune, but never can even Frenchmen have sung it with more relief or more tired joy.

The song ended and the Frenchmen broke into shouts of "Vive De Gaulle," and "Vive les Alliés." Just down the street the battle was raging. During the singing and the cheering the guns near by were roaring. The Germans across the river were firing anti-personnel shells, which burst overhead.

A formation of Messerschmitts, the largest I have ever seen in France, roared through the low clouds, pursued by our bursting flak. But the French just went on cheering for De Gaulle and the Allies. Then they broke up into groups and came forward to greet the British. "This is a great day, monsieur!" they exclaimed, as they shook our hands.

The Underground Battle Was Won

I went inside the grammar school. It was crowded with people who had found shelter there from the bombs and the guns. Mothers and children clasping each other as they perched on stacked bags of flour and other food, nuns tending a great room full of wounded, pails of soup passing through, nurses carrying in water and bandages; that was the grammar school of Caen. Men came round to tell me of this chief of resistance who had led the singing in the square. "He is a great man," his lieutenant told me. "He has organized all the fighting and all the underground. When this battle began the Gestapo were on his tail. He eluded them. Two days ago he was surrounded in a house. He crawled through a garden, climbed a wall and escaped."

The chief came in. He is probably thirty-six, but looked older today. He told me how he and his little army carried on the fight. "It was dangerous, deadly work and our forces were very small. But the battle was won."

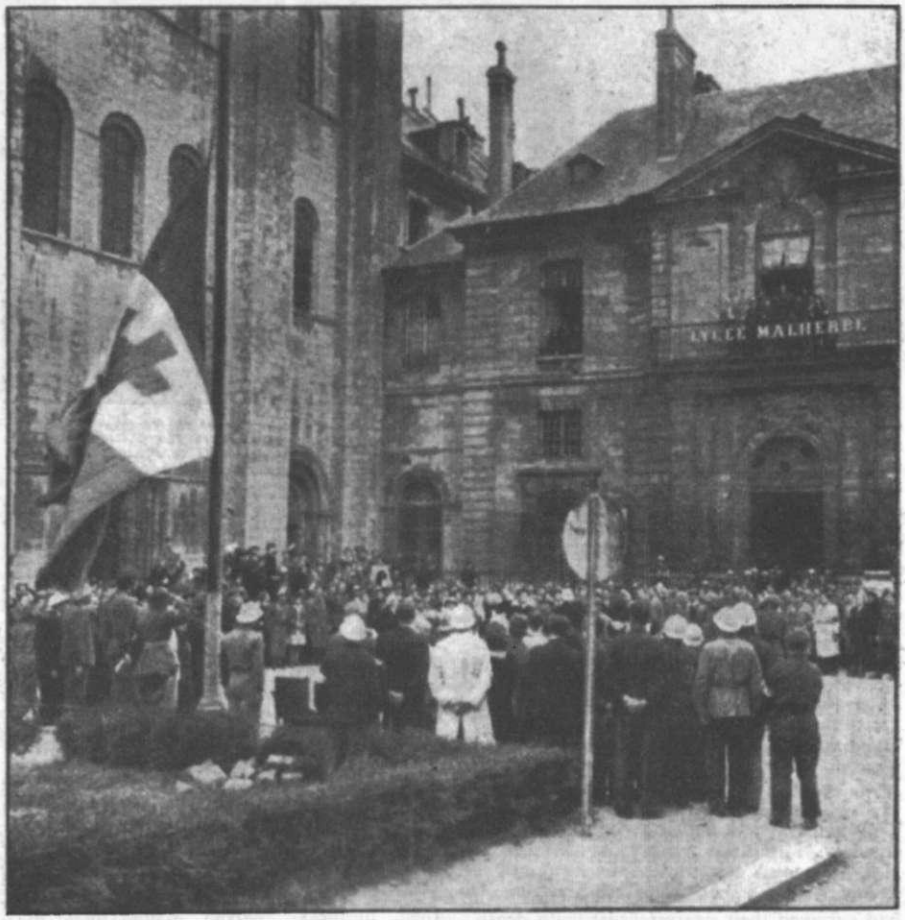
A young Frenchman came forward. He said three weeks ago a party of five Rover Scouts cycled in here from Paris. They had heard that the English had landed in Normandy, and hastened here to be in the fight. For three weeks they had played a big role in the underground movement. Then, when the battle began, they had taken arms and joined the fighting men. Last night they left again. They explained that their mission was to fight Germans. Their place was always in the rear of the enemy.

There is great damage in the town. Fires are still smouldering. Men and women are picking what they can from the debris that had been their homes, just as the people of London have gathered up the remnants of their possessions after a heavy raid. It is not a pleasant sight, a big town after a battle. It is a procession of death and destruction and burning. There is a trail of broken tramway wires and telephone lines. Unburied dead litter the gutters. There are dead dogs and heaps of discarded equipment.

And amid the ruin and desolation the people are cheering us and the children are running up to clasp our hands. Before the landing there were 60,000 people in this town. The Germans ordered an evacuation, and 20,000 left. Many more old people got out when fighting approached, but others refused to leave. They knew that if they stayed they would be free. So they stayed and saw the battle through—not too high a price, they think, to pay for liberation.

One father and mother came up to speak to me. She was in tears, and he held a photograph in his hand. It was a picture of their son. He is Paul Collette, a French sailor aged 21, who went out to shoot the traitor Laval in the streets of Versailles. He wounded him and was caught. The Germans took him away. His fate is still unknown.

As I drove out, skirting the shell-holes in the main road and evading the debris, the German guns opened up again. Shells were falling near the road, and they were bursting behind me as we drove past the shell-torn village of Carpiquet and the hangars where the Germans had fought so hard.



SIGN OF RELEASE from the tyrant's yoke is the Free French flag of Lorraine here being hoisted with simple ceremony in the Place du Lycée beside the abbey church of St. Etienne in Caen. The part played by men of the French resistance movement in the liberation of this Norman city is related in this page. See also pp. 164, 170-171. *Photo, British Newspaper Pool*

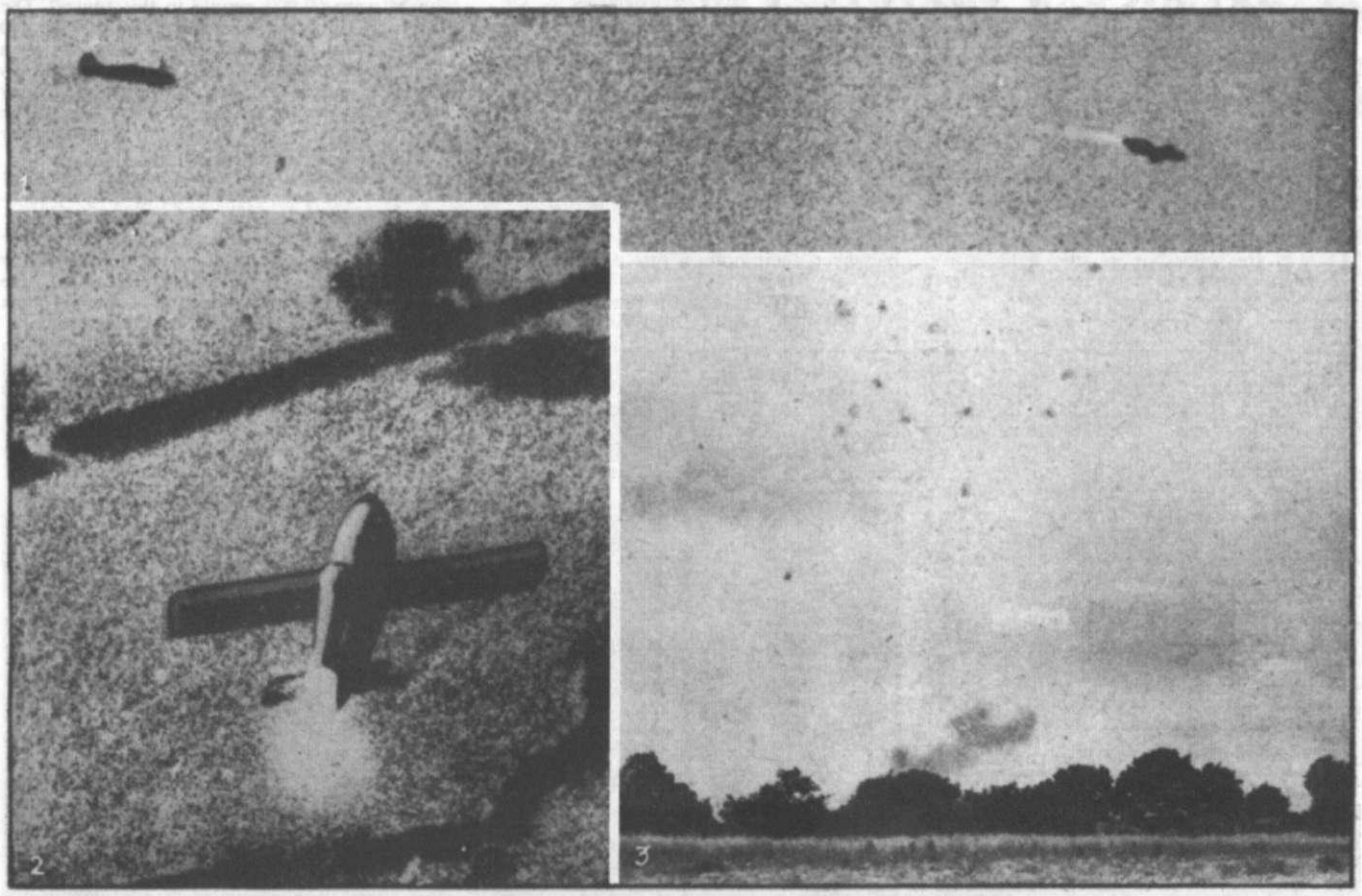
Tornado-like a Flying Bomb Roared Down at Me

Readers who have not been exposed to the peril of flying bombs will specially appreciate this vivid little pen-picture of the coming of the bomb, the impact and explosion and the dread aftermath, as experienced by W. A. E. Jones. His story is given here by arrangement with the Daily Herald.

SPLINTERED bark whipped clean from the beech trees by the blast sears past my head. A cold, swishing wind like a miniature tornado carries my hat away. The ground quakes. Great spouts of mud spatter down. Through the choking, oily smoke, I can see the tall trees bowing, cracking, falling. Then the leaves fall. They fall languidly.

My car is buried under a mantle of green until it looks like a curved mound of camouflage. A woman lies near me. She is dead. One of her shoes has been ripped from her foot. Her stocking is torn open. Her little brown dog is there too. His country walk ended in death for him. Now the leaves are mercifully covering him. An old man—his tweeds are plastered with soil—peers from a bush, says shakily, "Where did it go?" So I point to a tangle of green metal that has dug itself into the grass a few yards from us. It is all that is left of the flying bomb that roared down on us a minute ago.

I had a ringside seat for this robot. I had a close-up of Hitler's indiscriminate warfare on Southern England—and I am able to



CATCHING UP WITH A FLYING BOMB, an R.A.F. fighter (1, left) closes in to destroy this indiscriminate German weapon directed against our civilian life. A reconnaissance plane, getting on the tail of another flying bomb, took this remarkable photograph (2). Plume of black smoke rising above the trees (3) marks the end of yet another, this time shot down by our gunners. **(See also illus. p. 183.)**
Photos, G.P.U., U.S. Official

write about it because a tree saved my life. It took the blast. There's no symmetry about that tree now. It has been stripped of its branches. It looks now like a decrepit, bare old skeleton creaking dolefully as it droops over the scene.

Down one side of the tree the bark has been sheered off. The sharpest knife couldn't have done a cleaner job. The robot bomb raced towards us in a downward glide. We dived for cover. We huddled in the grass, waiting. Then the explosion. When I could hear again I listened to a woman's voice crying shakily, "Look, look. I'm alive!" The woman was leaning from a wrecked window. Her home was a ruin. But she was still alive and she wanted us to know all about it. Then there were more voices. On all sides there were voices of people who had survived their nearest brush with death.

We began to realize at that moment that we had all escaped—save the old woman and her brown dog. A butcher's boy cycling by jumped from his machine. He tore his apron from him, offered it "for bandages for the wounded." Nurses from a hospital in their impeccable white uniforms dashed into the debris as it still creaked and heaved. They brought comfort with them. They brought soothing words with them and cool fingers to tend the injured. A barmaid—she was a big woman—loomed up. She had a tray of drinks with her. She was mighty popular.

Soon, very soon, this "incident" was under control. And all its untidiness was receding and life was going on again. "It doesn't take long to put things right, does it?" said my chauffeur as he picked the splintered boughs from the running board. As we came home we drove down a street where another flying bomb had dropped an hour or two before.

You could hear a piano tinkling in a house that was patched up with tarpaulin and boarding.

It was the house of the local music master. He was there with a pupil. The lesson was going on. Away in another street a man was turning the handle of his barrel-organ. Two little girls hopped around him. "Say, Mister," they chanted, "has your monkey been bombed?" They had been bombed. For all that was left of their home was being heaped on a handcart that would soon be on its way to another house ready for them at two hours' notice.

I Travelled the Red Army Road to Vitebsk

Enemy-occupied for three years, Vitebsk was retaken by Soviet forces on June 26. Capt. Eugene Krieger, Izvestia war correspondent, watched the Russian advance, and in this story (reprinted by arrangement with The Star) tells what he saw in this devastated Central Russia town.

I WAS driving along the roads of Belorussia to Vitebsk when I learned that Chausy, 70 miles to the south, had been taken. At once my memory went back to those grim days in the summer of 1941, when thousands of refugees were fleeing from burning Minsk. Children were crying for their mothers; Soviet artillerymen were setting up heavy howitzers with which to counter by point-blank fire the avalanche of panzers which a year or so before had flattened out the fields and vineyards of France.

On a road running parallel to ours I saw a column of tanks dashing towards Chausy. German aircraft flew overhead. Our only chance of escape was to outstrip the panzers and slip across the river, which divided the town in two. We just managed it. That was on July 15, 1941.

Now, in June 1944 I have travelled that road again. Long before we got to Vitebsk we were caught in a flood of iron and steel. Soviet motors were roaring on the ground and in the air. Endless columns of vehicles were dashing ahead at a steady 40 to 50 kilometres an hour.

We were deafened by the roar which arose from every kind of fighting machine—from motor-cycles with their protruding machine-guns, weaving through the narrow gaps in the iron flood, to heavy tanks, armoured cars, troop carriers, tractors towing long-range guns, lorries loaded with pontoons, trucks piled with mines and shells, wireless cars and staff cars.

The metal of the Urals workers is flowing like scorching lava across Belorussia. In it German divisions are perishing, German steel is melting and hope is withering in Germans' hearts. The Red Army had forced the Western Dvina, skirted Vitebsk from the north and south, and, closing the ring far beyond the city, swept into one vast pocket the picked German troops and the makeshift battalions which had been rushed to the front from deep in the rear.

German prisoners were being questioned at our staff headquarters. They declared they had been ordered to hold the left bank of the Western Dvina at all costs until June 26, on which day they were promised "big reinforcements" for the relief of Vitebsk. But these "big reinforcements" found themselves caught in the same pocket, and on the morning of June 26 the Red Flag was waving over the city. On the southern side of the pocket the Germans attempted to break through across a bridge.

They were allowed to mass and then mown down by a sudden and devastating squall of artillery fire. It was a holocaust. Today

the road is jammed with scorched and battered German trucks, and wagons loaded with ammunition and supplies. The actual assault of Vitebsk began at five a.m. The Germans had taken up positions on a line strengthened by an intricate system of trenches, wire entanglements and minefields.

This was pounded to pieces by the Soviet artillery, and within a few hours our troops had broken into the outskirts. The Germans launched four counter-attacks, but the Soviet artillerymen rushed their guns into the thick of the fight in the city's streets, and by evening our troops had reached the river, which divides the town in two. All the bridges had been destroyed by the Germans, except one. This, too, was mined, and the Germans were preparing to blow it up, but Soviet sappers dashed forward and the Nazis were driven back.

We met a group of 150 captured Germans on that bridge. The officers marched in front. All had iron crosses on their breasts, and most of the soldiers wore decorations. The cathedral in the centre of Vitebsk had been blown up by the Germans, and Cathedral Square was pitted with shell-holes.

Everywhere we came across similar scenes of destruction. The Germans had dynamited the railway station, the post office, hospitals and clubs, children's homes—in fact, every large building. Every house in Station Avenue, Vitebsk's favourite promenade, was wrecked. But the surviving inhabitants crept from their cellars and hiding-places, weary and wan, but weeping with joy at being free again.

Today the wrecked and mutilated city is still filled with smoke from the fires. Troops are still marching through the streets, heavy guns rumble over the cobble stones. The last Germans are being ferreted out of cellars in the distant outskirts But peace is again wrapping its soothing veil around the smoking ruins.

IN WRECKED BUT FREED VITEBSK life begins to assume some normality again, as a woman member of the Red Army, whose job is that of traffic regulator, takes her stand beside the signpost at a street crossing (left). Returning to their homes with their few possessions are these inhabitants of the city who had hidden from the enemy in the country outside (right). How the Red Army finally stormed Vitebsk is described in the story commencing in the page opposite.

Photos, Pictorial Press

OUR DIARY OF THE WAR

JULY 5, Wednesday *1,768th day*

Western Front.—Canadian troops held firm at Carpiquet against counter-attacks.

Air.—Allied bombers attacked airfields in Low Countries and flying-bomb sites in Pas de Calais.

Russian Front.—In White Russia, Soviet troops captured Smorgon, on Minsk-Vilna railway; in Karelia, Salmi, N. of Lake Ladoga, was occupied.

Mediterranean.—U.S. bombers on final lap of shuttle-mission attacked railway yards in S. France on way from Italy to Britain. Liberators bombed submarine pens at Toulon.

Pacific.—Allied bombers attacked Yap and Woleai in Carolines.

JULY 6, Thursday *1,769th day*

Air.—Allied aircraft attacked targets in N.W. Germany, airfields in France and military installations in Pas de Calais.

Russian Front.—Soviet troops occupied Kovel, S.E. of Brest Litovsk.

Home Front.—Mr. Churchill announced that between June 15 and July 6, flying-bombs launched against London and S. England numbered 2,754, causing 2,752 fatal and about 8,000 other casualties.

General.—Germans announced that Field-Marshal von Rundstedt, supreme commander in West, was displaced by Von Kluge.

JULY 7, Friday *1,770th day*

Western Front.—Allied troops crossed river Vire and launched attack S.E. of Carentan; heavy air bombardment of Caen.

Air.—More than 1,000 U.S. bombers attacked oil plants and aircraft works near Leipzig; at night R.A.F. bombed flying-bomb depot in caves N.W. of Paris.

Mediterranean.—Italian-based bombers attacked oil plants at Odertal, Silesia.

Italy.—Allied troops captured Rosignani, 12 m. from Leghorn.

Japan.—U.S. Super-Fortresses again bombed Yawata steel works and Sasebu naval base on Kyushu Island.

JULY 8, Saturday *1,771st day*

Western Front.—British and Canadians launched three-pronged attack on Caen.

Air.—Railway communications from Loire to Channel and from Paris to Nantes attacked by Allied aircraft.

Russian Front.—Baranovichi, S.W. of Minsk, captured by Russians; Soviet troops broke into Vilna.

Pacific.—Organized Japanese resistance ceased on Saipan Island. U.S. warships shelled Guam in Marianas.

JULY 9, Sunday *1,772nd day*

Western Front.—Main part of Caen captured by 2nd Army; Germans held suburb of Vaucelles across the Orne.

Russian Front.—Lida, railway junction E. of Grodno, captured by Red Army.

Italy.—Volterra, S.E. of Leghorn, captured by 5th Army troops.

Pacific.—U.S. carrier-borne aircraft attacked Guam and Rota, in Marianas.

Home Front.—First of new deep shelters opened in London.

JULY 10, Monday *1,773rd day*

Western Front.—2nd Army attacked from Odon bridge-head towards Orne.

Air.—Transport and communications in N. France attacked by Allied aircraft.

Russian Front.—Vilna encircled and by-passed; Dvinsk-Kaunas road cut.

Burma.—All organized Japanese resistance ended in Ukhrul.

JULY 11, Tuesday *1,774th day*

Western Front.—Gen. Montgomery announced total to date of 54,000 prisoners in Normandy.

Air.—About 1,000 U.S. bombers attacked Munich area.

Mediterranean.—Naval installations at Toulon attacked by U.S. heavy bombers.

General. — U.S. Govt. recognized French Committee of National Liberation as de facto authority for civil administration of France.

JULY 12, Wednesday *1,775th day*

Air.—More than 1,000 U.S. bombers again attacked communications and other targets in Munich area; Lancasters bombed flying-bomb sites in France.

Russian Front.—Troops of 2nd Baltic Front opened new offensive, capturing Idritsa on Moscow-Riga railway.

Mediterranean.—Railway centres in S. France attacked by Allied heavy bombers.

JULY 13, Thursday *1,776th day*

Air.—Third consecutive attack on Munich area by U.S. bombers; night attacks by R.A.F. on railway centres in N. France.

Russian Front.—Vilna liberated by 3rd White Russian army after five days' fighting.

Mediterranean.—U.S. heavy bombers attacked railway yards on Milan-Venice line and oil storage tanks at Porto Marghera and Trieste.

JULY 14, Friday *1,777th day*

Air.—Lancasters attacked flying-bomb installations; rail and road communications in France also bombed.

Russian Front.—Pinsk, E. of Brest Litovsk, and Volkovysk, E. of Bialystok, captured by Soviet troops.

Mediterranean.—Oil refineries and railway yards in Hungary attacked by Allied bombers.

Italy.—French troops of 5th Army captured Poggibonsi, N. of Siena.

JULY 15, Saturday *1,778th day*

Western Front.—2nd Army launched night attack between Odon and Orne.

Air.—Night attack by R.A.F. on flying-bomb depot in caves at Nucourt.

Russian Front.—Red Army forced river Niemen, E. of East Prussia.

Mediterranean.—About 750 U.S. bombers attacked oil refineries at Ploesti.

Pacific.—U.S. carrier-borne aircraft made twelfth consecutive attack on Guam, Marianas.

JULY 16, Sunday *1,779th day*

Air.—Heavy force of U.S. bombers attacked Munich and Saarbruecken areas.

Russian Front.—Grodno, 45 miles from E. Prussian border, captured by Russians; new Red Army offensive launched E. of Lvov.

Italy.—Arezzo fell to troops of 8th Army.

JULY 17, Monday *1,780th day*

Air.—Railways and bridges on German supply routes in France heavily attacked by U.S. bombers; Lancasters attacked rocket-site in N. France with 12,000-lb. bombs.

Russian Front.—Soviet troops captured Sebezh, near Latvian border.

Italy.—8th Army troops advancing N. of Arezzo crossed river Arno.

JULY 18, Tuesday *1,781st day*

Western Front.—British and Canadians of 2nd Army broke through E. of the Orne and S.E. of Caen, preceded by very heavy air bombardment. St. Lo fell to U.S. troops.

Air.—Heavy force of U.S. bombers attacked German air research stations at Peenemunde and Zinnowitz on Baltic.

Russian Front.—Announced that in three days' fighting round Lvov more than 600 places, including Krasnoye and Brody, had been liberated by Russians.

Italy.—Ancona, Adriatic port, captured by 8th Army Polish troops.

Pacific.—U.S. warships shelled Guam from close range.

★ Flash-backs ★

1940

July 9. *French warships at Alexandria agreed to demilitarization.*

July 11. *German air attacks on Channel convoys began.*

July 18. *Aaland Islands to be demilitarized at request of U.S.S.R.*

1941

July 8. *Soviet Military Mission arrived in London.*

July 12. *Anglo-Soviet agreement signed in Moscow for mutual assistance against Germany.*

1942

July 12. *Germans began drive towards Stalingrad following failure to capture Voronezh.*

1943

July 5. *Germans launched abortive offensive in Kursk and Orel sectors of Russia.*

July 9-10. *Allied airborne and seaborne forces landed in Sicily.*

July 15. *Russians launched offensive in direction of Orel.*

THE WAR IN THE AIR

by Capt. Norman Macmillan, M.C., A.F.C.

AIR war news is good from all fronts but China. I will deal with the Chinese situation later. For a moment let us glance at the other zones.

It is now agreed that the pre-invasion work of the British and American air forces operating from the United Kingdom (and to a lesser extent from Italy) played a great part in making the Normandy landings the unexpectedly swift and light-casualty successes they were. The cost of this advance contribution was not a light one to the air forces concerned.

In the first five months of 1944 the R.A.F. lost 1,483 bombers and 276 fighters; the U.S.A. 8th A.F. lost 1,407 bombers and 673 fighters; the U.S.A. 9th A.F. lost more than 100 medium and light bombers. Flying in these lost aircraft were 24,260 men (equal to two divisions) who died or were taken prisoner, and these figures do not include those who were flown back dead or wounded in planes that returned. But the sacrifice of the army of the air was not in vain. The communication system operated by the Wehrmacht was so dislocated that reinforcements could not be rushed to Normandy when the Allied army landed, and the consolidation of the bridgehead was thus made sure with relatively small casualties. In addition it must be credited to the continued bomber and fighter attacks, and sweeps by the Allied air forces, that the Germans have been unable to maintain adequate air forces over the three fronts—in Normandy, Italy and Russia.

The total tonnages of bombs dropped have reached figures which are still soaring to new records. U.S. bombers dropped 58,750 tons of H.E. and incendiary bombs on Europe in June. Bomber Command, too, broke all records by dropping 56,000 tons in that month.

IN Russia air power has played an important part in the successes of the Red Army in White Russia. Over this vast battlefield, where the warfare has been of the kind commonly called "fluid." Red Air Force Stormovik battle-planes, escorted by fighters, have ranged with penetrating effect over the German forces. In waves of from 30 to 50 the Stormoviks have made deadly attacks on troop concentrations and supply lines, and have been counted as one of the major factors in the great Russian victory leading, so far, to the capture of Vilna.

The shuttle-bombing of the U.S. air forces has continued to affect the war adversely for the enemy on all fronts. The heavy bombers have used all Europe as though it were a baseball ground. Leaving Britain on June 21, led by Col. J. M. Blakeslee Don, of Ohio, they bombed oil-plants at Ruhland, 50 miles S.E. of Berlin, and landed in Russia; en route from Russia to Italy they bombed the oil refinery at Drohobycz in Galicia; flying from Italy to Britain (where they landed on July 5) they attacked the rail centre of Beziers, near Montpelier in southern France. They were escorted throughout the whole journey of 7,000 miles by long-range Mustang fighters which shot down 7 German fighters on the first leg and 12 on the second.

New applications of bombing power were witnessed. Two daylight attacks were made on June 14 by Lancasters and Halifaxes of Bomber Command against Le Havre harbour. These bombers dropped 12,000-lb. bombs in the water to raise tidal-waves inside E-boat pens, and among a concentration of R-boats and other vessels. A similar attack was made on the following day against Boulogne by Lancasters and Halifaxes. At least 80 vessels were sunk or damaged in the two harbours.

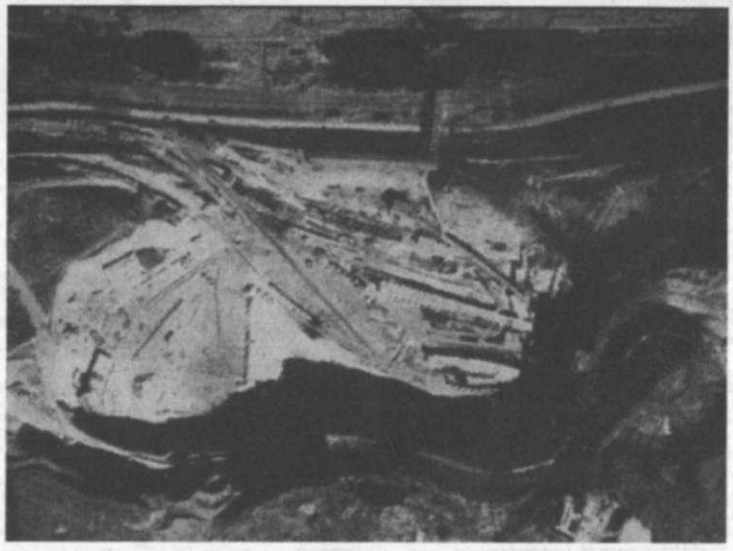
BOMBER COMMAND played a part in the air and artillery bombardment that preceded the fall of Caen to the infantry and tanks. At dusk on July 7 a force of 450 Lancasters and Halifaxes concentrated 2,300 tons of bombs on German troops, tanks, guns, defence posts and strongpoints in the north part of this important inland port. The British troops, waiting their turn to attack, were awed by the spectacle, in which they saw for the first time an air attack on the scale applied to industrial targets in Germany. As in the latter raids the bomb-aimers were aided by the Pathfinder Force's markers.

The Pathfinders were the first aircraft to be equipped with the British Mark XIV bomb-sight which permits accurate bomb-aiming even when the aircraft is banking. With earlier British bomb-sights it was necessary to fly the aircraft both straight and level to enable the aiming to be made with accuracy so that the bombs would hit the target. Amid the growing artillery barrages, and with the intensifying air fighting by day and night, it was often impossible to fly the aircraft in conditions suitable to the scientific requirements of the fastidious bomb-sight. Moreover, with the development of the tremendously swift mass raids there was no opportunity for the recurrent runs over the target which were such a feature of almost all the earliest bombing attacks by British aircraft. The first run had to be the unloading run in most cases. Scientists began work to meet the new requirements, and the Mark XIV sight was issued to the Pathfinders first in August 1942. All Bomber Command aircraft now have it. It was used in the battles of the Ruhr, Hamburg and Berlin. U.S. medium bombers use the same sight under the designation T.1 sight.

IN the night of July 6 Super-Fortresses of the 20th Bomber Command of the U.S.A.A.F. attacked naval installations at Sasebo and the steel works at Yawata, on Kyushu Island. This was their third attack against Metropolitan Japan. They are at present employed as the equivalent of a naval task force in connexion with Pacific strategy. But in China the war situation is not satisfactory. The present Japanese advance in the Changsha area threatens to form an armoured Japanese line across all China, endangering future raids against Japan proper. The repulse of this Japanese move is considered essential to the success of future operations in the whole of the South-East Asia zone. Meanwhile, two difficulties in China are the reported famine conditions which are said to be affecting the Chinese army, and the delivery of much Allied war material into the hands of independent war-lords, who apply it to their own personal ends. Clearly the pressure of Admiral Nimitz's Pacific sea and air power towards China's mainland may have to be further increased to speed the actual "Normandy" assault on the Chinese mainland.

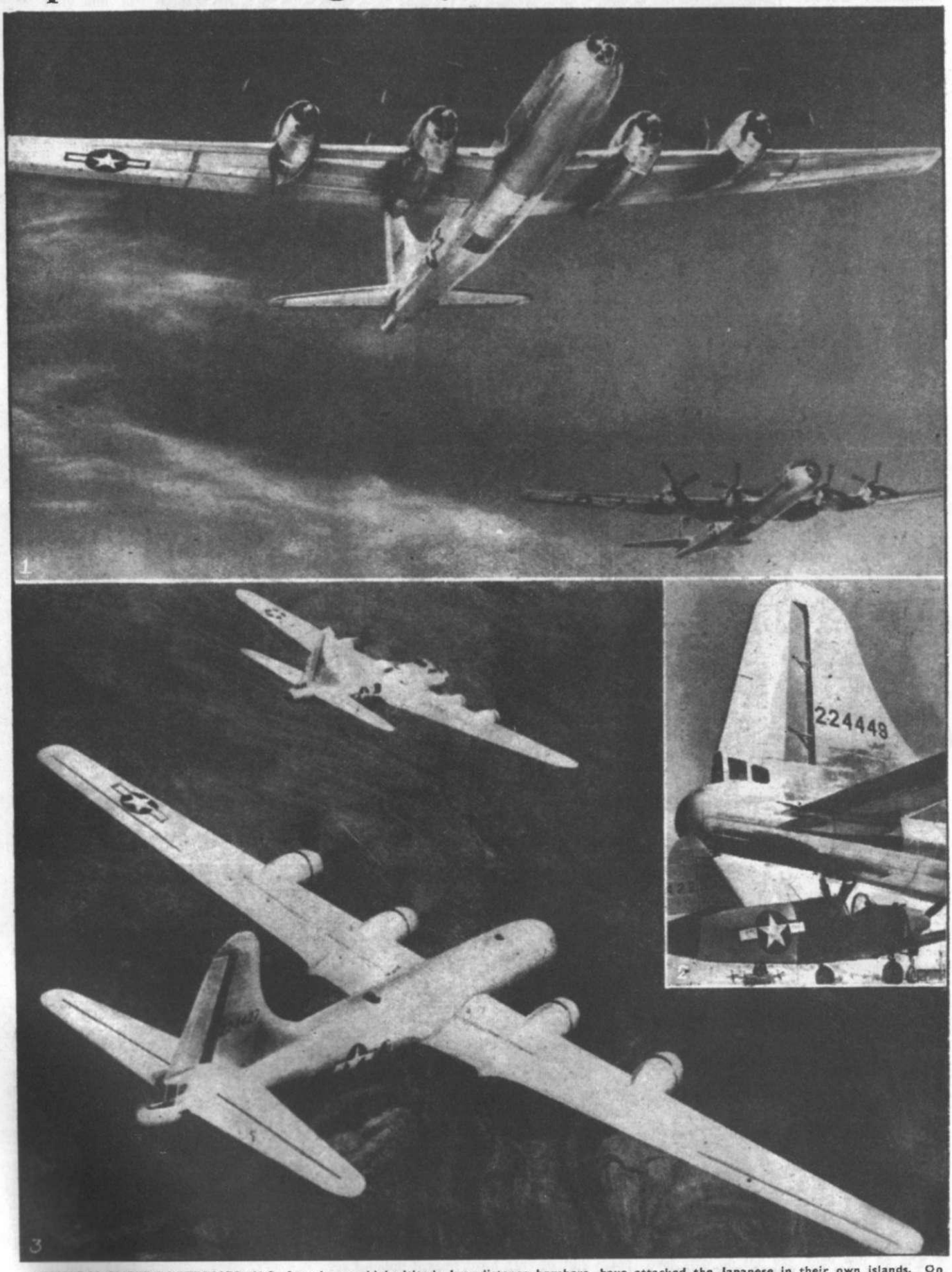
In the Pacific zone the battle for airfields continues with growing success. The seizure of Saipan in the Marianas is an event of note (see pp. 166, 167), as are the attacks against Guam and Iwojima and Chichijima islands (Bonin Group). But will the air ring perimeter contract swiftly enough for Chiang Kai-shek?

Air-minelaying closed the Kiel and Königsberg canals in the early summer. Mosquitoes were used for this work. Recently the Danube has been similarly closed. And ranging far across Europe the oil-war bombers have been busy burning up many of Hitler's sources of the essential war spirit, in refineries, storage plants and synthetic producing units. Railways and bridges were hit, too



FROM THIS LONG-RANGE ROCKET SITE near Watten, in the Pas de Calais district of France (top), the Germans hoped to send death-dealing explosives against this country to add to the anti-civilian missions of their flying bombs. But Allied aircraft spotted it and smashed it, leaving the site closely pockmarked with accurately placed bombs (bottom). *Photos, British Official*

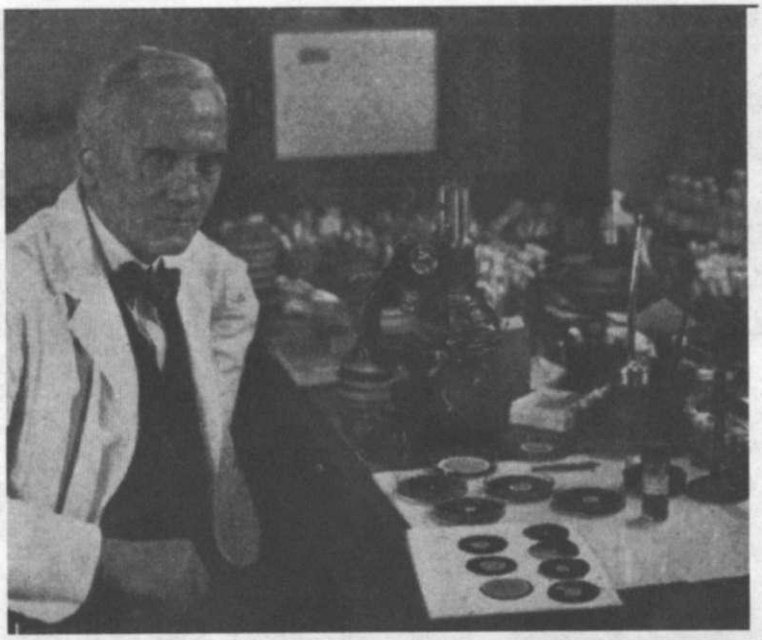
Japan Bombed Again by America's New 'Heavies'



BOEING-29 SUPER-FORTRESSES. U.S. Army's new high-altitude long-distance bombers, have attacked the Japanese in their own islands. On June 15, 1944, they hit Yawata at the northern extremity of Kyushu, and the enemy's biggest iron and steel works; on July 7 the attack was repeated. Super-Fortresses (1) have a wing-span of over 141 ft., and four engines each of 2,200 horse-power. The tail fin, 27 ft. in height, dwarfs a normal plane (2). Super-Fortress (3, nearer camera) and Flying Fortress compared.

Photos, U.S. Official, Keystone

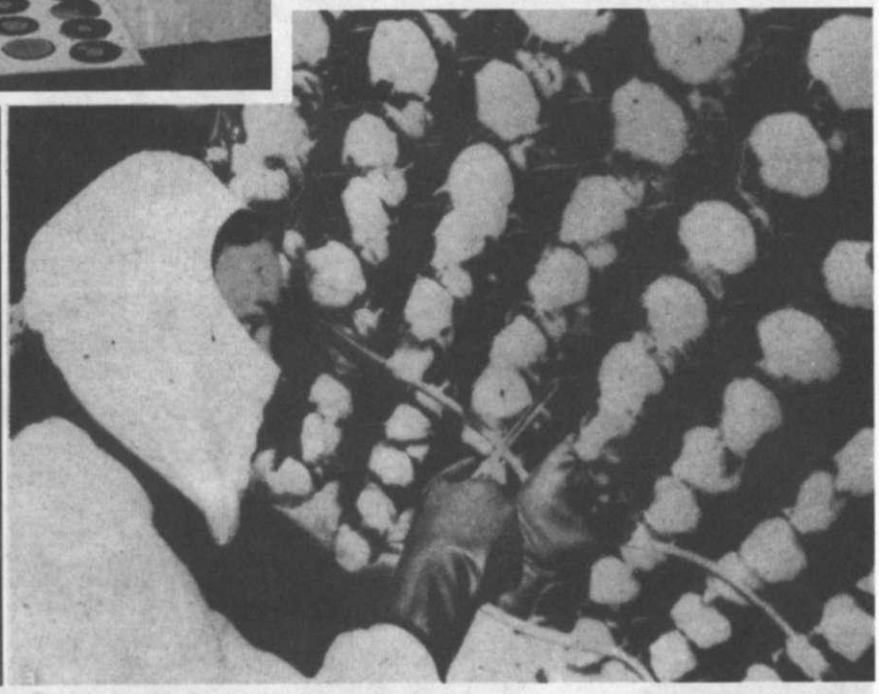
Wonder-drug Penicillin Saves Limbs and Lives

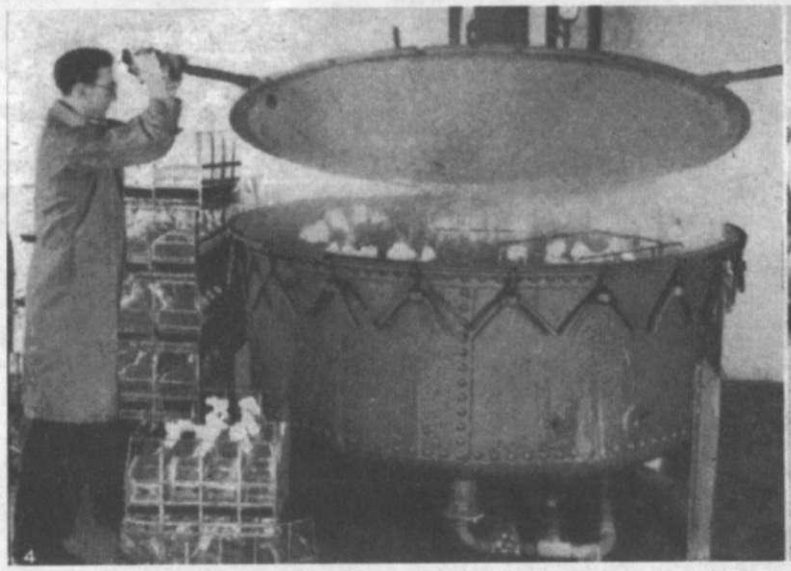


ONE OF THE MOST POWERFUL WEAPONS in mankind's armoury against disease might have remained undiscovered but for the fact that Professor Alexander Fleming, Professor of Bacteriology at the University of London and St. Mary's Hospital Medical School, was interested in what, by sheer accident, had happened to a deadly microbe culture he had under observation : this had been spoilt by a green mould caused by the chance arrival of a minute airborne fungus spore. Noticing that the deadly microbe colonies in the vicinity of the green mould began to disappear, he realized that here might lie the way for another great step in the endless fight against disease, and he began to experiment with the mould. Later it was identified as Penicillium notatum, and the antibiotic (anti-disease microbe substance) it produced was named penicillin.

Between the original discovery by Professor Fleming and the finding of a successful means of producing penicillin in purer and more concentrated form, years had to pass. In 1938 Professor Sir Howard Florey, Professor of Pathology, Oxford University, took up the search which finally led to success and proved penicillin capable of killing many deadly disease germs. By 1943 much progress had been made in producing penicillin in laboratories in Britain, Canada, Australia and America.

Today the wonder-drug is saving the limbs and lives of our wounded in battlefields everywhere, while an indication that penicillin, hitherto restricted to military use, will be released for civilian treatment was given by Mr. Churchill; on July 6, 1944, referring to the flying bomb attacks on this country, he said that penicillin would be available for all casualties caused.





AT WORK ON HIS GREAT DISCOVERY, Professor Alexander Fleming has before him mould specimens from which penicillin is extracted (1). Professor Sir Howard Florey, who took up the research and helped it to final success (2). A woman laboratory assistant (3) inoculates sterile culture with spores which will later produce penicillin. A steam container ensures that the culture flasks themselves are absolutely sterile before the mould goes in (4). The vital mould growing in a culture flask (5).

Photos, British Official, Topical Press, Keystone

Editor's Postscript

A FRIEND who has fought both in Italy and in Normandy tells me of the difference between the people in those two theatres of war. When the British troops arrived in Calabria and made their way slowly up the peninsula, the Italians all said with relief, "Now the war for us is over!" The Norman peasants said the opposite. "Now we can begin the war!" they exclaimed. The Italians are reported by all I have talked to from that country to be sick of all public matters. They want to interest themselves only in their daily occupations, their homes and families. They have no faith in any leaders. The House of Savoy, which had held them together for some three-quarters of a century, no longer commands their respect and will probably be dismissed. Where are the statesmen who can lead the nation back to order and prosperity? Those are questions which thoughtful British soldiers who have been among them are asking.

THERE is another contrast between Italians and Frenchmen of the North which strikes all who have been on both fronts. The Italians welcomed our troops with excited exuberance. They threw flowers to them, gave them wine if they had it, shouted *Viva Inghilterra* as they ran alongside the columns on the march. But our men could not get rid of the fancy that they might have given the Germans the same sort of reception. The Normans throw no flowers, do not cheer, though they do hand out what they have in the way of food and drink. But they show that they are honest-to-God haters of the Germans and that they are genuinely happy to see the men who are going to drive the oppressors off French soil. They are not demonstrative folk, these farmers and smallholders of the country between the Channel and Rouen. Maupassant described them with exactitude in his short stories, showing them as hard-working, thrifty to the point of miserliness, secretive where property is concerned, cheerful, and fond of a joke if it is a fairly obvious one. Pleasant people I have always found them as acquaintances. It would be difficult to form real friendships among them, I fancy.

Maj.-Gen. SIR FRANCIS WILFRED DE GUINGAND, K.B.E., D.S.O., Chief of Staff to the 21st Army Group commanded by General Montgomery. Aged 44, a brilliant administrator, he was behind successes gained by the 8th Army in North Africa, Sicily and Italy. He was created a K.B.E. (Knight Commander of the British Empire) for his part in planning operations in Normandy.
Photo, Associated Press

GEGEN Dummheit kampfen Götter selbst vergebens, says the well-known line of Goethe—"against stupidity even the Gods fight in vain." But it is not true in the long run. Stupidity defeats itself. Napoleon was vastly more intelligent than most of the adventurers who have aimed at world-domination. But Napoleon did stupid things. The most stupid thing he did was to march his armies into Russia. That broke him. On this point the teaching of history is so plain that it seems impossible anyone could fail to profit by it. Well, Hitler failed, and his stupidity has broken him. For two years he had everything in his favour. If he had insisted on Goering continuing the Battle of Britain a bit longer, he would in all probability have weakened us so much in the air that he might have been able to invade Britain, relying on his bombers to deal with our naval forces. That was a colossal blunder, but not his worst. If in the middle of 1941 he had concentrated on the effort to crush the forces of the British Empire, there was a chance that he would, for a time at any rate, have succeeded. Instead, he repeated the mistake Napoleon had made: he marched into Russia. And now—well, now he knows!

IT is one of the oldest of jokes that farmers always complain of the weather. No one who has farmed, or had an allotment, or even cultivated a small garden, will make fun of farmers for that. If you are trying to grow things, you are bound to find our climate annoying. You are almost certain to grumble. Unless you have a phlegmatic temperament which enables you to take everything calmly as it comes, you are pretty sure to take gloomy views about the chances of your crops, whatever they may be. A long drought makes you think all your vegetables will be dried up. Frosts and high winds seem certain to ruin your fruit. Sunless weather suggests that nothing will ripen properly. But fortunately these fears almost always turn out to be unfounded. Nothing is so bad as it looks. This year there were at one time the most melancholy predictions as to what the wheat harvest would be. Now we are reassured. Spring-sown wheat will not be quite as good as last year, but the autumn-sown may be better. Sugar beet prospects are excellent. Fruit is nothing like so bad as growers feared a month or two ago. We shall not have to tighten our belts after all.

ONE surprise of the wartime theatre was the long run of Oscar Wilde's romantic comedy, An Ideal Husband. It was beautifully acted, and at a small playhouse, but even that would not seem to account fully for its popularity. One explanation is that it deals with "high life." When it was written, duchesses were social leaders (Dame Irene Vanbrugh acted one gloriously); young men of fashion thought a lot about their clothes and their buttonholes; the whirl of gaiety in the London Season from May to July made its votaries really glad when it came to an end and they could go to Cowes for yachting, or to the Highlands for shooting, or to some Continental Spa for their stomach's sake, so that they need not stay up till three or four in the morning and perpetually be lunching and dining out. The interest taken now in this sort of existence and those who led it resembles that with which other audiences look at Love for Love, depicting a social scene still farther away from our own time. And possibly the number of titled persons in the cast may please spectators rather tired of the middle-class comedies that have been holding the stage so long. Fifty years ago, when Oscar Wilde was writing, almost all plays were about the aristocracy. Since Freddie Lonsdale produced On Approval, which has recently been made into a film, I can hardly remember one that has dealt with dukes, marchionesses, and the like.

DUE doubtless to the pace at which the war compels us all to live I find that events which at the time were of immense importance retain but fuzzy outlines in most minds. How many could state offhand, for instance, the objects of our surprise landings in North-West Africa 21 months ago? Realization of this fading of memory was brought home to me with something of a shock, when in exchange for a shilling I recently acquired a copy of The Army at War: Tunisia—an extravagantly generous and admirably illustrated publication prepared for the War Office by the Ministry of Information.

The coldly official narrative—a compressed mass of dates, figures and places—reminds me that the objects to which I allude were "to effect a landing in Morocco and Algeria; to rally the local French to the Allied cause and ultimately to occupy Tunisia so as to menace from the rear the enemy forces opposing the 8th Army; to re-open communications through the Mediterranean, and to secure a base for subsequent operations against the underbelly of the Axis in southern Europe." This shillingsworth gives the data of the part played so magnificently by our land forces, up to the complete collapse of the Axis armies engaged, and the capture by the Royal Sussex Regiment of Von Arnim on May 12, 1943. Results of those victories are evident now in our Continental successes.

I OFTEN hear comments on the change that the war years have made in the opinions of many Conservatives, especially the younger ones, in the House of Commons. Among Socialists there has been a noticeable shift of view-point as well. Mr. Herbert Morrison, for example, who not many years ago was for nationalizing all big industries wholesale, now says in a Fabian Society pamphlet that anything of that kind is ruled out as a matter of immediate practical politics. He does not think the nation would agree to it and, even if they did, it would be impossible. He speaks "as one with some experience of administration." Just so! Then there is Mr. A. L. Rowse, one of the Socialist intellectuals, who believes that, while we shall reach out to greater equality, we must "see that individual quality and enterprise, private and personal freedom, are not ironed-out, but preserved and even enriched." If the Socialists put the brake on, and Conservatives step on the gas, they will be able to work together and we may move forward as a whole towards a New Society which will develop naturally and peaceably from the old.

R.A.F. Chaplain as Newsboy in Normandy

ADOPTING A HIGHLY APPRECIATED ROLE, an R.A.F. squadron-leader chaplain in one of the Normandy bridge-head sectors delivers eagerly awaited newspapers, which were flown from England on the same day, to ground staff engaged in servicing a Mustang aircraft. Vicars and curates, who normally receive the rank of squadron-leader on entering the R.A.F., are promoted in the same way as other officers—consideration being given to suitability in their office, and length of service. *Photo, British Official: Crown Copyright*

Printed in England and published every alternate Friday by the Proprietors, THE AMALGAMATED PRESS, LTD., The Fleetway House, Farringdon Street, London, E.C.4. Registered for transmission by Canadian Magazine Post. Sole Agents for Australia and New Zealand: Messrs. Gordon & Gotch, Ltd.; and for South Africa: Central News Agency, Ltd.—August 4, 1944. S.S. *Editorial Address:* JOHN CARPENTER HOUSE, WHITEFRIARS, LONDON, E.C.4.